

ECLA**EUROPEAN CLASSIFICATION****A61B**

DIAGNOSIS; SURGERY; IDENTIFICATION (analysing biological material G01N, e.g. [G01N33/48](#); obtaining records using waves other than optical waves, in general [G03B42/00](#))

[N: WARNING

[C2012.05] The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

A61B5/0295	covered by A61B5/026
A61B5/1455	covered by A61B5/00N4
A61B5/1459	covered by A61B5/00N4B
A61B5/1464	covered by A61B5/00N4F
A61B5/1468	covered by A61B5/00N2
A61B5/1473	covered by A61B5/00N2B
A61B5/1477	covered by A61B5/00N2D
A61B5/1482	covered by A61B5/00N2F
A61B5/151	covered by A61B5/14B2
A61B5/153	covered by A61B5/14B
A61B5/154	covered by A61B5/14B12
A61B5/157	covered by A61B5/00 and s. gr.
A61B17/03	covered by A61B17/00
A61B17/125	covered by A61B17/122
A61B17/138	covered by A61B17/12
A61B17/76	covered by A61B17/74D2
A61B17/78	covered by A61B17/74D2
A61B17/90	covered by A61B17/88
A61B 17/94	covered by A61B17/28E

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Note

This subclass covers instruments, implements and processes for diagnostic, surgical and person-identification purposes, including obstetrics, instruments for cutting corns, vaccination instruments, finger-printing, psycho-physical tests.

Guide heading:

Diagnosis; Psycho-physical tests

A61B1/00

Instruments for performing medical examinations of the interior of cavities or tubes of the body by visual or photographic inspection, e.g. endoscopes (examination of body cavities or body tracts using ultrasonic, sonic or infrasonic waves [A61B8/12](#); instruments, e.g. endoscopes, for taking a cell sample [A61B10/00](#); endoscopic cutting instruments [A61B17/32](#); surgical instruments using a laser beam being directed along or through a flexible conduit [A61B18/22](#); technical endoscopes [G02B23/24](#)); **illuminating arrangements therefor** (for the eyes [A61B3/00](#)) [C9902]

[A61B1/00C](#)

. [N: Operational features of endoscopes] [N1112]

[A61B1/00C1](#)

. . [N: characterised by electronic signal processing] [N1112]

[A61B1/00C1B](#)

. . . [N: of control signals] [N1112]

[A61B1/00C1D](#)

. . . [N: of image signals (G06T takes precedence)] [N1112]

[A61B1/00C2](#)

. . [N: characterised by data transmission] [N1112]

[A61B1/00C2B](#)

. . . [N: using optical means] [N1112]

A61B1/00C2D	. . .	[N: using wireless means] [N1112]
A61B1/00C2E	. . .	[N: using electrical cables] [N1112]
A61B1/00C4	. .	[N: provided with data storages] [N1112]
A61B1/00C4B	. . .	[N: removable] [N1112]
A61B1/00C5	. .	[N: characterised by power management] [N1112]
A61B1/00C5B	. . .	[N: characterised by power supply] [N1112]
A61B1/00C5B2	. . . .	[N: externally powered, e.g. wireless] [N1112]
A61B1/00C5B6	. . . .	[N: internally powered] [N1112]
A61B1/00C5B6B	. . . . .	[N: rechargeable] [N1112]
A61B1/00C5D	. . .	[N: Means for power saving, e.g. sleeping mode] [N1112]
A61B1/00C6	. .	[N: provided with data input arrangements for the user] [N1112]
A61B1/00C6B	. . .	[N: for user message recording] [N1112]
A61B1/00C7	. .	[N: provided with signal output arrangements] [N1112]
A61B1/00C7B	. . .	[N: Display arrangement] [N1112]
A61B1/00C7B2	. . . .	[N: Constructional features of the display] [N1112]
A61B1/00C7B4	. . . .	[N: for multiple images] [N1112]
A61B1/00C7B8	. . . .	[N: positioned at proximal end of the endoscope body] [N1112]
A61B1/00C7D	. . .	[N: for alerting the user] [N1112]
A61B1/00C8	. .	[N: provided with means for testing or calibration] [N1112]
A61B1/00C9	. .	[N: provided with identification means for the endoscope] [N1112]
A61B1/00C95	. .	[N: provided with means for preventing overuse] [N1201]
A61B1/00E	. .	[N: Constructional details of the endoscope body] [N1112]
A61B1/00E2	. .	[N: Proximal part of endoscope body, e.g. handles (A61B1/005B4 takes precedence)] [N1112]
A61B1/00E2B	. . .	[N: Valve switch arrangements] [N1112]
A61B1/00E4	. .	[N: Insertion part of the endoscope body (A61B1/005B6 takes precedence)] [N1112]
A61B1/00E4B	. . .	[N: with externally grooved shaft] [N1112]
A61B1/00E4D	. . .	[N: with externally roughened shaft] [N1112]
A61B1/00E4F	. . .	[N: with stiffening means] [N1112]
A61B1/00E4H	. . .	[N: characterised by distal tip features] [N1112]
A61B1/00E4H1	. . . .	[N: Balloons] [N1112]
A61B1/00E4H2	. . . .	[N: Baskets] [N1112]
A61B1/00E4H3	. . . .	[N: Tools (A61B17/00E takes precedence)] [N1112]
A61B1/00E4H4	. . . .	[N: Hoods] [N1112]
A61B1/00E4H5	. . . .	[N: Nozzles] [N1112]
A61B1/00E4H6	. . . .	[N: Suction openings] [N1112]
A61B1/00E4H7	. . . .	[N: Optical elements] [N1112]
A61B1/00E4H8	. . . .	[N: Deflecting means for inserted tools] [N1112]
A61B1/00E4H9	. . . .	[N: the distal tip features being detachable] [N1112]
A61B1/00E5	. .	[N: designed for single use] [N1202]
A61B1/00E6	. .	[N: characterised by modular construction] [N1112]

- A61B1/00E7 . . [N: characterised by self-sufficient functionality for stand-alone use] [N1201]
- A61B1/00E8 . . [N: Manufacturing of endoscope parts] [N1112]

- A61B1/00F . [N: Connection or coupling means] [M1110]
- A61B1/00F2 . . [N: Electrical cables for connection to external units] [N1112]
- A61B1/00F4 . . [N: Optical cables, e.g. for connection to an external light source] [N1112]
- A61B1/00F6 . . [N: Tubes or pipes, e.g. for fluid supply to the endoscope] [N1112]
- A61B1/00F8 . . [N: Connectors, fasteners and adapters, e.g. on the endoscope handle] [N1112]
- A61B1/00F8B . . . [N: electrical, e.g. electrical plug-and-socket connection] [N1112]
- A61B1/00F8D . . . [N: optical, e.g. for light supply cables] [N1112]
- A61B1/00F8F . . . [N: mechanical, e.g. for tubes or pipes] [N1112]

- A61B1/00H . [N: Accessories for endoscopes] [N1112]
- A61B1/00H2 . . [N: Drive units, e.g. for endoscopic tools] [N1112]
- A61B1/00H4 . . [N: Oversleeves ([A61B1/00J](#) takes precedence)] [N1112]
- A61B1/00H6 . . [N: End pieces, e.g. caps, seals, forceps plugs] [N1112]
- A61B1/00H8 . . [N: Fastening elements for attaching accessories to the outside of an endoscope shaft, e.g. clips, clamps or bands] [N1112]

- A61B1/00J . [N: with means for preventing contamination, e.g. by using a sanitary sheath] [M1110]
- A61B1/00J4 . . [N: Hygienic packaging] [N1112]

- A61B1/00P . [N: Holding or positioning arrangements] [N1107] [C1205]
- A61B1/00P1 . . [N: using articulated arms] [N1107]
- A61B1/00P2 . . [N: using everted tubes] [N1107]
- A61B1/00P3 . . [N: using guide tubes] [N1107] [M1110]
- A61B1/00P4 . . [N: using self propulsion] [N1107] [C1202]
- A61B1/00P5 . . [N: using magnetic field] [N1107] [C1205]
- A61B1/00P6 . . [N: using motor drive units] [N1201]

- A61B1/00S . [N: Optical arrangements ([A61B1/002](#), [A61B1/06](#) take precedence)] [N1107]
- A61B1/00S2 . . [N: with light-conductive means, e.g. fibre optics ([A61B1/07](#) takes precedence)] [N1107]
- A61B1/00S2B . . . [N: Details of optical fibre bundles, e.g. shape or fibre distribution] [N1112]
- A61B1/00S2D . . . [N: Details of single optical fibres, e.g. material or cladding] [N1112]
- A61B1/00S3 . . [N: with means for scanning] [N1112]
- A61B1/00S4 . . [N: characterised by the viewing angles] [N1112]
- A61B1/00S4B . . . [N: for 90 degrees side-viewing] [N1112]
- A61B1/00S4D . . . [N: for off-axis viewing] [N1112]
- A61B1/00S4F . . . [N: for multiple fixed viewing angles ([A61B1/00S7](#) takes precedence)] [N1112]
- A61B1/00S4H . . . [N: for variable viewing angles] [N1112]
- A61B1/00S5 . . [N: with imaging filters] [N1112]
- A61B1/00S6 . . [N: with focusing or zooming features] [N1107]
- A61B1/00S6B . . . [N: characterised by variable lenses] [N1112]
- A61B1/00S7 . . [N: adapted for stereoscopic vision] [N1107]

- A61B1/00S8 . . [N: with eyepieces] [N1112]
- A61B1/00S8B . . . [N: characterised by multiple eyepieces] [N1112]
- A61B1/002 . having rod-lens arrangements ([A61B1/055](#) takes precedence) [N9711]
- A61B1/005 . Flexible endoscopes [N9711]
- A61B1/005B . . [N: with controlled bending of insertion part [M1110]
- A61B1/005B4 . . . [N: Constructional details of control elements, e.g. handles] [N9711] [C1205]
- A61B1/005B4B [N: using distributed actuators, e.g. artificial muscles] [N9902]
- A61B1/005B6 [N: Constructional details of insertion parts, e.g. vertebral elements] [N9902]
- A61B1/005B6B [N: the insertion parts being asymmetric, e.g. for unilateral bending mechanisms] [N9902]
- A61B1/005B8 . . . [N: Constructional details of force transmission elements, e.g. control wires] [N1204]
- A61B1/005D . . [N: using shape-memory elements] [N9711]
- A61B1/008 . . Articulations [N9711] [C1205]
- A61B1/01 . . Guiding arrangements therefore [N9711]
- A61B1/012 . characterised by internal passages or accessories therefor [N9711]
- A61B1/012E . . [N: Endoscope within endoscope] [N1201]
- A61B1/015 . . Control of fluid supply or evacuation [N9711]
- A61B1/018 . . for receiving instruments [N9711]
- A61B1/04 . combined with photographic or television appliances [N: (camera adapters [G03B17/48](#))]
- A61B1/04C . . [N: Capsule endoscopes for imaging] [N1011] [M1110]
- A61B1/04D . . [N: characterised by a proximal camera, e.g. a CCD camera] [C1107]
- A61B1/04F . . [N: for fluorescence imaging] [N1201]
- A61B1/045 . . Control therefor [N9711]
- A61B1/05 . . characterised by the image sensor, e.g. camera, being in the distal end portion [C1102]
- A61B1/05C . . . [N: Details of CCD assembly] [N1112]
- A61B1/05D . . . [N: being detachable] [N1112]
- A61B1/055 . . having rod-lens arrangements [N9711]
- A61B1/06 . with illuminating arrangements [M1110]
- A61B1/06B . . [N: for annular illumination] [N1112]
- A61B1/06D . . [N: for radial illumination] [N1112]
- A61B1/06F . . [N: for off-axis illumination] [N1112]
- A61B1/06H . . [N: for monochromatic illumination] [N1112]
- A61B1/06J . . [N: providing two or more wavelengths] [N1107]
- A61B1/06M . . [N: with illumination filters] [N1112]
- A61B1/06P . . [N: with wavelength conversion] [N1112]
- A61B1/06R . . [N: Endoscope light sources] [N1112]
- A61B1/06R2 . . . [N: at proximal end of an endoscope] [N1112]

- A61B1/06R4 . . . [N: at distal tip of an endoscope] [N1112]
- A61B1/06R6 . . . [N: using light emitting diodes (LED)] [N1112]
- A61B1/06R8 . . . [N: head mounted] [N1112]
- A61B1/07 . . using light-conductive means, e.g. optical fibres

- A61B1/12 . with cooling or rinsing arrangements
- A61B1/12D . . [N: provided with means for cleaning post-use] [M1201]
- A61B1/12D1 . . . [N: using cleaning tools, e.g. brushes] [N1112] [M1201]
- A61B1/12D2 . . . [N: using washing machines] [N1112]
- A61B1/12D4 . . . [N: using fluid circuits] [N1112]
- A61B1/12E . . [N: provided with means for cleaning in-use] [N1201]
- A61B1/12F . . [N: with means for preventing fogging ([A61B1/253](#) takes precedence)] [N9607]
- A61B1/12G . . [N: provided with means for regulating temperature] [N1112]

- A61B1/227 . for ears, i.e. otoscopes [N9711]
- A61B1/227B . . [N: with controlled air pressure] [N0002]

- A61B1/233 . for the nose, i.e. nasoscopes, [N: e.g. testing of patency of Eustachian tubes] [N9711] [C0002]

- A61B1/24 . for the mouth, i.e. stomatoscopes, e.g. with tongue depressors ([tongue depressors per se A61B13/00](#)); Instruments for opening or keeping open the mouth ([combined with saliva removers A61C17/00](#); [mouth openers for animals A61D15/00](#)) [C1205]
- A61B1/247 . . with means for viewing areas outside the direct line of sight, e.g. dentists` mirrors
- A61B1/253 . . . with means for preventing fogging

- A61B1/267 . for the respiratory tract, e.g. laryngoscopes, bronchoscopes
- A61B1/267A . . [N: for monitoring movements of vocal chords] [N1102]
- A61B1/267D . . [N: Bronchoscopes]

- A61B1/273 . for the upper alimentary canal, e.g. oesophagoscopes, gastroscopes
- A61B1/273B . . [N: Oesophagoscopes]
- A61B1/273D . . [N: Gastroscopes]

- A61B1/303 . for the vagina, i.e. vaginoscopes [N9711]

- A61B1/307 . for the urinary organs, e.g. urethrosopes, cystoscopes [N9711]

- A61B1/31 . for the rectum, e.g. proctoscopes, sigmoidoscopes, [N: colonoscopes] [N9711]

- A61B1/313 . for introducing through surgical openings, e.g. laparoscopes [N9711]
- A61B1/313B . . [N: for laparoscopy] [N9711]
- A61B1/313D . . [N: for examination of the epidural or the spinal space] [N9711]
- A61B1/313F . . [N: for examination of the interior of blood vessels] [N9711]
- A61B1/317 . . for bones or joints, e.g. osteoscopes, arthroscopes [N9711]

- A61B1/32 . Devices for opening or enlarging the visual field, e.g. of a tube of the body ([dilators A61M29/00](#))

- A61B3/00** **Apparatus for testing the eyes; Instruments for examining the eyes** (eye inspection using ultrasonic, sonic or infrasonic waves [A61B8/10](#); devices for treatment of the eyes [A61F9/00](#); exercisers for the eyes [A61H5/00](#); optical systems in general [G02B](#))
- A61B3/00B . [N: provided with illuminating means ([A61B3/117](#) takes precedence; goniolenses used for laser treatment [A61F9/009](#); illuminating means for optical instruments [G02B27/00](#))]
- A61B3/00C . [N: Operational features thereof] [N1112]
- A61B3/00C1 . . [N: characterised by electronic signal processing, e.g. eye models] [N1112]
- A61B3/00C6 . . [N: characterised by user input arrangements] [N1112]
- A61B3/00C7 . . [N: characterised by display arrangements] [N1112]
- A61B3/00C7B . . . [N: Constructional features of the display] [N1112]
- A61B3/00C7D . . . [N: for multiple images] [N1112]
- A61B3/00C9 . . [N: with identification means for the apparatus] [N1112]
- A61B3/00D . [N: provided with adjusting devices, e.g. operated by control lever ([manipulators B25J](#))]
- A61B3/00F . [N: provided with means for patient positioning] [N1112]
- A61B3/00H . [N: Fixation targets for viewing direction] [N1112]
- A61B3/02 . Subjective types, i.e. testing apparatus requiring the active assistance of the patient
- A61B3/02B . . [N: for testing contrast sensitivity] [N1112]
- A61B3/024 . . for determining the visual field, e.g. perimeter types
- A61B3/028 . . for testing visual acuity; for determination of refraction, e.g. phoropters
- A61B3/028B . . . [N: Phoropters] [N9607]
- A61B3/032 . . . Devices for presenting test symbols or characters, e.g. test chart projectors ([A61B3/036](#) takes precedence)
- A61B3/032B [N: provided with red and green targets] [N1112]
- A61B3/036 . . . for testing astigmatism
- A61B3/04 . . . Trial frames; Sets of lenses for use therewith ([lenses per se G02C7/02](#))
- A61B3/06 . . for testing light sensitivity, e.g. adaptation; for testing colour vision
- A61B3/06B . . . [N: for testing light sensitivity, i.e. adaptation]
- A61B3/06D . . . [N: for testing colour vision]
- A61B3/08 . . for testing binocular or stereoscopic vision. e.g. strabismus
- A61B3/08B . . . [N: for testing strabismus]
- A61B3/09 . . for testing accommodation
- A61B3/10 . Objective types, i.e. instruments for examining the eyes independent of the patients' perceptions or reactions
- A61B3/10B . . [N: for measuring distances inside the eye, e.g. thickness of the cornea ([A61B3/11](#) takes precedence)]
- A61B3/10D . . [N: for examining the tear film]
- A61B3/10F . . [N: for wavefront analysis] [N1107]
- A61B3/10H . . [N: for optical coherence tomography (OCT)] [N1112]

- A61B3/10J . . [N: for confocal scanning] [N1201]
- A61B3/103 . . for determining refraction, e.g. refractometers, skiascopes
- A61B3/103B . . . [N: for measuring astigmatism (testing astigmatism [A61B3/036](#))]
- A61B3/107 . . for determining the shape or measuring the curvature of the cornea
- A61B3/11 . . for measuring interpupillary distance or diameter of pupils
- A61B3/11B . . . [N: for measuring interpupillary distance]
- A61B3/11D . . . [N: for measuring diameter of pupils]
- A61B3/113 . . for determining or recording eye movement
- A61B3/117 . . for examining the anterior chamber or the anterior chamber angle, e.g. gonioscopes
- A61B3/117B . . . [N: for examining the eye lens]
- A61B3/117B5 [N: for determining lens opacity, e.g. cataract] [N1112]
- A61B3/12 . . for looking at the eye fundus, e.g. ophthalmoscopes ([A61B3/13](#) takes precedence)
- A61B3/12D . . . [N: Multiple lens hand-held instruments]
- A61B3/12F . . . [N: for diagnostics of the iris]
- A61B3/12H . . . [N: using coherent radiation]
- A61B3/12H2 [N: for measuring blood flow, e.g. at the retina]
- A61B3/12J [N: specially adapted for observation of ocular blood flow, e.g. by fluorescein angiography]
- A61B3/125 . . . with contact lenses (contact lenses per se [G02C7/04](#))
- A61B3/13 . . Ophthalmic microscopes
- A61B3/13B . . . [N: in binocular arrangement]
- A61B3/135 . . . Slit-lamp microscopes
- A61B3/14 . . Arrangements specially adapted for eye photography [N: (apparatus or arrangements for taking photographs per se [G03B](#))]
- A61B3/14B . . . [N: by video means]
- A61B3/15 . . . with means for aligning, spacing or blocking spurious reflection; [N: with means for relaxing]
- A61B3/15B [N: for aligning]
- A61B3/15D [N: for spacing]
- A61B3/15F [N: for blocking]
- A61B3/15F5 [N: of corneal reflection] [N1112]
- A61B3/16 . . for measuring intraocular pressure, e.g. tonometers
- A61B3/16B . . . [N: Non-contacting tonometers]
- A61B3/18 . . Arrangement of plural eye-testing or -examining apparatus
- A61B3/18B . . [N: characterised by modular construction] [N1112]

A61B5/00 **Detecting, measuring or recording for diagnostic purposes** (radiation diagnosis [A61B6/00](#); diagnosis by ultrasonic, sonic or infrasonic waves [A61B8/00](#)); **Identification of persons** [N: (measuring or recording in general subclasses of [G01](#); medical informatics [G06F19/00M](#))] [C1207]

[N: **WARNING**

[C1208]Groups [A61B5/40](#) - [A61B5/74M2](#) do not correspond to former or present IPC

groups. Concordance ECLA : IPC for these groups is as follows: [A61B5/40](#) : [A61B5/00](#)
[A61B5/41](#) : [A61B5/00](#) [A61B5/42](#) : [A61B5/00](#) [A61B5/43](#) : [A61B5/00](#) [A61B5/44](#) : [A61B5/00](#)
[A61B5/45](#) : [A61B5/00](#) [A61B5/48](#) : [A61B5/00](#) [A61B5/68](#) : [A61B5/00](#) [A61B5/70](#) : [A61B5/00](#)
[A61B5/72](#) : [A61B5/00](#) [A61B5/74](#) : [A61B5/00](#)

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- A61B5/00B . Remote monitoring of patients using telemetry, e.g. transmission of vital signals via a communication network ([A61B5/07](#) takes precedence; transmission systems for measured values G08C; transmission H04B; transmission of digital information H04L; wireless communication networks H04W) [C1205]
- A61B5/00B3 . . [N: characterised by the type of physiological signal transmitted] [N1204]
- A61B5/00B3B . . . [N: ECG or EEG signals] [N1204]
- A61B5/00B3D . . . [N: Temperature signals] [N1204]
- A61B5/00B3F . . . [N: Foetal or obstetric data] [N1204]
- A61B5/00B3H . . . [N: Medical image data ([A61B1/00C2](#), [A61B6/56](#), [A61B8/56](#) take precedence)] [N1204]
- A61B5/00B5 . . [N: characterised by features of the telemetry system] [N1204]
- A61B5/00B5B . . . [N: transmitting optical signals (transmission by light [H04B10/00](#))] [N1204]
- A61B5/00B5D . . . [N: Monitoring the patient using a local or closed circuit, e.g. in a room or building ([A61B5/00B5B](#) takes precedence)] [N1204]
- A61B5/00B5F . . . [N: Monitoring a patient using a global network, e.g. telephone networks, internet] [N1204]
- A61B5/00B5H . . . [N: for multiple sensor units attached to the patient, e.g. using a body or personal area network] [N1204]
- A61B5/00B7 . . [N: characterised by the transmission medium] [N1204]
- A61B5/00B7B . . . [N: Body tissue as transmission medium, i.e. transmission systems where the medium is the human body] [N1204]
- A61B5/00B9 . . [N: Implanted circuitry] [N1204]
- A61B5/00D . [N: Features or image-related aspects of imaging apparatus classified in [A61B5/00](#), e.g. for MRI, optical tomography or impedance tomography apparatus; arrangements of imaging apparatus in a room (image data processing or generation G06T)] [N1204]
- [N: **WARNING**
Group [A61B5/00D](#) and subgroups are not complete pending a reorganisation
]
- A61B5/00D2 . . [N: adapted for acquisition of images from more than one imaging mode, e.g. combining MRI and optical tomography] [N1204]
- A61B5/00D4 . . [N: Performing a preliminary scan, e.g. a prescan for identifying a region of interest] [N1204]
- A61B5/00D6 . . [N: adapted for image acquisition of a particular organ or body part ([A61B5/00P12](#) takes precedence; arrangements for optical scanning [A61B5/00P1](#))] [N1204]
- A61B5/00D6B . . . [N: for the brain] [N1204]
- A61B5/00D6D . . . [N: for the heart] [N1204]
- A61B5/00D8 . . [N: Arrangements of imaging apparatus in a room, e.g. room provided with shielding or for improved access to apparatus] [N1204]
- A61B5/00M . [N: Detecting, measuring or recording by applying mechanical forces or stimuli ([A61B5/021](#), [A61B5/48X](#) and [A61B9/00](#) take precedence)] [N1110] [C1202]

[N: WARNING

[N1110] Group [A61B5/00M](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/022](#), [A61B5/11](#)]

- A61B5/00M2 . . [N: by applying vibrations] [N1110]
- A61B5/00M4 . . [N: by applying pressure, e.g. compression, indentation, palpation, grasping, gauging] [N1110] [C1202]
- A61B5/00M6 . . [N: by applying suction] [N1110]
- A61B5/00M8 . . [N: by applying motion other than vibrations, e.g. rolling, rubbing, applying a torque, tribometry] [N1202]
- A61B5/00P . . [N: using light, e.g. diagnosis by transillumination, diascopy, fluorescence ([A61B5/00T](#), [A61B5/1455](#), [A61B5/024D](#) and [A61B5/026B](#) take precedence)] [C1202]
- A61B5/00P1 . . [N: Arrangements for scanning] [N1110]

[N: WARNING

[N1110] Group [A61B5/00P1](#) and subgroups are not complete pending a reorganisation, see also group [A61B5/00P](#)]

- A61B5/00P1A . . . [N: Body surface scanning] [N1110]
- A61B5/00P1C . . . [N: Optical coherence imaging] [N1110] [C1202]
- A61B5/00P1E . . . [N: Confocal scanning] [N1110]
- A61B5/00P5 . . [N: by measuring fluorescence emission] [N1202]
- A61B5/00P6 . . [N: by tomography, i.e. reconstruction of 3D images from 2D projections ([A61B5/00P1C](#) takes precedence)] [C1202]
- A61B5/00P7 . . [N: by spectroscopy, i.e. measuring spectra, e.g. Raman spectroscopy, infrared absorption spectroscopy ([A61B5/00P5](#) takes precedence)] [N1202]
- A61B5/00P9 . . [N: Devices for viewing the surface of the body, e.g. camera, magnifying lens] [N1202]
- A61B5/00P9B . . . [N: using mirrors, i.e. for self-examination] [N1204]
- A61B5/00P12 . . [N: adapted for particular medical purposes] [N1202]
- A61B5/00P12B . . . [N: for introduction into the body, e.g. by catheters ([A61B5/1459](#) takes precedence)] [N1202]
- A61B5/00P12B2 [N: using infra-red radiation] [N1202]
- A61B5/00P12D . . . [N: for oral or dental tissue] [N1202]
- A61B5/00P12F . . . [N: for mammography] [N1202]
- A61B5/00T . . [N: Detecting, measuring or recording by applying one single type of energy and measuring its conversion into another type of energy] [N1202]
- A61B5/00T3 . . [N: by applying light and detecting acoustic waves, i.e. photoacoustic measurements] [N1202]
- A61B5/00T5 . . [N: by applying acoustic waves and detecting light , i.e. acoustooptic measurements] [N1202]
- A61B5/01 . . Measuring temperature of body parts; [N: Diagnostic temperature sensing, e.g. for malignant or inflamed tissue] (clinical thermometers [G01K5/22](#); thermometers for special purposes [G01K13/00](#)) [N1112] [C1207]
- A61B5/01B . . [By temperature mapping of body parts] [N1112]

- A61B5/02 . Detecting, measuring or recording pulse, heart rate, blood pressure or blood flow; Combined pulse/heart-rate/blood pressure determination; Evaluating a cardiovascular condition not otherwise provided for, e.g. using combinations of techniques provided for in this group with electrocardiography or electroauscultation; Heart catheters for measuring blood pressure
 - A61B5/02D . . [N: Evaluating blood vessel condition, e.g. elasticity, compliance] [N1112]
 - A61B5/02D2 . . . [N: Determining aneurysm] [N1204]
 - A61B5/02D4 . . . [N: Determining capillary fragility] [N1112]
 - A61B5/02F . . [N: Determining haemodynamic parameters not otherwise provided for, e.g. cardiac contractility or left ventricular ejection fraction] [N1112]
 - A61B5/02F2 . . . [N: Determining blood viscosity] [N1204]
 - A61B5/02H . . [N: Determining blood loss or bleeding, e.g. during a surgical procedure] [N1204]
 - A61B5/0205 . . Simultaneously evaluating both cardiovascular conditions and different types of body conditions, e.g. heart and respiratory condition
 - A61B5/0205B . . . [N: Simultaneously evaluating both cardiovascular condition and temperature]
 - A61B5/021 . . Measuring pressure in heart or blood vessels ([A61B5/0205](#) takes precedence)
- [N: **WARNING**
[N1112][A61B5/021B](#) and subgroups are not complete pending a reorganisation; see also group [A61B5/021](#)
]
- A61B5/021B . . . [N: from analysis of pulse wave characteristics] [N1112]
 - A61B5/021B2 [N: of pulse wave amplitude ([A61B5/022C](#) takes precedence)] [N1112]
 - A61B5/021B4 [N: of pulse wave propagation time] [N1112]
 - A61B5/021D . . . [N: by using induced vibration of the blood vessel] [N1112]
 - A61B5/021F . . . Details of apparatus construction, e.g. pump units or housings therefor, cuff pressurising systems, arrangements of fluid conduits or circuits ([A61B5/022D](#), [A61B5/0235](#) take precedence) [N1204]
 - A61B5/0215 . . . by means inserted into the body ([catheters A61M25/00](#)) [C9807]
 - A61B5/0215B [N: specially adapted for venous pressure]
 - A61B5/0215D [N: by optical transmission]
 - A61B5/0215F [N: Calibration means]
 - A61B5/0215H [N: provided with two or more sensor elements] [N9507]
 - A61B5/022 . . . by applying pressure to close blood vessels, e.g. against the skin; Ophthalmodynamometers
- [N: **WARNING**
[N1112]Subgroups of [A61B5/022](#) are not complete pending a reorganisation; see also this group
]
- A61B5/022A using the Korotkoff method [N1112]
 - A61B5/022B [N: Ophthalmodynamometers]
 - A61B5/022C using the oscillometric method [N1112]
 - A61B5/022D [N: Occluders specially adapted therefor ([tourniquets A61B17/132](#))]
 - A61B5/022D2 [N: of small dimensions, e.g. adapted to fingers] [N9607]
 - A61B5/0225 the pressure being controlled by electric signals, e.g. derived from Korotkoff sounds

- A61B5/0225B [N: the pressure being controlled by plethysmographic signals, e.g. derived from optical sensors]
 - A61B5/023 the pressure transducers comprising a liquid column
 - A61B5/0235 Valves specially adapted therefor
 - A61B5/024 Detecting, measuring or recording pulse rate or heart rate ([A61B5/0205](#), [A61B5/021](#) take precedence)
 - A61B5/024A [N: Determining heart rate variability] [N1112]
 - A61B5/024B [N: of foetuses] [C1207]
 - A61B5/024D [N: using photoplethysmograph signals, e.g. generated by infra-red radiation ([A61B5/1455N2](#) takes precedence)] [M1112]
 - A61B5/024D2 [N: within occluders]
 - A61B5/024D4 [N: Details of sensor]
 - A61B5/024D4B [N: for infra-red radiation]
 - A61B5/024F [N: with portable devices, e.g. worn by the patient]
 - A61B5/024H [N: Details of sensor ([A61B5/024D4](#) takes precedence)]
 - A61B5/0245 by using sensing means generating electric signals, [N: i.e. ECG signals]
 - A61B5/0245B [N: provided with high/low alarm devices]
 - A61B5/025 within occluders, e.g. responsive to Korotkoff sounds ([electric stethoscopes A61B7/04](#))
 - A61B5/0255 Recording instruments specially adapted therefor
 - A61B5/026 Measuring blood flow [N: ([A61B3/12H2](#), [A61B3/12J](#) take precedence)]
 - A61B5/026B [N: using optical means, e.g. infra-red light]
 - A61B5/026D [N: using NMR]
 - A61B5/0265 using electromagnetic means, e.g. electromagnetic flowmeter
 - A61B5/027 using catheters
 - A61B5/0275 using tracers, e.g. dye dilution
 - A61B5/0275B [N: Radioactive tracers]
 - A61B5/028 by thermo-dilution
 - A61B5/0285 Measuring or recording phase velocity of blood waves
 - A61B5/029 Measuring or recording blood output from the heart, e.g. minute volume [N: ([A61B8/06B](#) takes precedence)]
 - A61B5/0295 using plethysmography, i.e. measuring the variations in the volume of a body part as modified by the circulation of blood therethrough, e.g. impedance plethysmography [N1112]
- [N: **WARNING**
[N1112]This sub-group is not complete pending the completion of a reclassification; see also groups [A61B5/026](#)
]
- A61B5/03 Detecting, measuring or recording fluid pressure within the body other than blood pressure, e.g. cerebral pressure; [N: Measuring pressure in body tissues or organs ([A61B5/20D3](#) takes precedence)] [C1202]
 - A61B5/03B [N: Intracranial pressure]
 - A61B5/03D [N: Spinal fluid pressure]
 - A61B5/03F [N: Uterine pressure] [C1202]
 - A61B5/03F2 [N: Intra-uterine probes therefor]

- A61B5/03H . . [N: by means introduced into body tracts ([A61B5/03D](#) and [A61B5/03F2](#) take precedence)]
- A61B5/03H2 . . . [N: Measuring oesophageal pressure]
- A61B5/03H6 . . . [N: Measuring oral pressure]
- A61B5/04 . Detecting, measuring or recording bioelectric signals of the body or parts thereof [M1112]
- A61B5/04B . . [N: adapted to neuroelectric signals, e.g. nerve impulses] [N9902]
- A61B5/04D . . [N: Measuring direct current (D.C.) or slowly varying biopotentials] [N1112]
- A61B5/04J . . [N: Input circuits for EEG-, or EMG-signals]
- A61B5/04M . . [N: Detecting magnetic fields produced by bio-electric currents (measuring magnetic variables in general [G01R33/00](#))]
- A61B5/04M2 . . . [N: specially adapted for magnetocardiographic signals]
- A61B5/04M4 . . . [N: specially adapted for magneto-encephalographic signals]
- A61B5/04M4B [N: using evoked response]
- A61B5/04N . . [N: Vector-cardiography]
- A61B5/04R . . [N: Analysis of electro-cardiograms, electro-encephalograms, electro-myograms]
- A61B5/04R2 . . . [N: by measuring frequency distribution using a set of filters (arrangements for analysing frequency spectra in general [G01R23/00](#))]
- A61B5/04R2B [N: provided with alarm devices]
- A61B5/04R4 . . . [N: by using digital filtering]
- A61B5/04R4B [N: provided with alarm devices]
- A61B5/0402 . . Electrocardiography, i.e. ECG
- A61B5/0402B . . . [N: ECG simulator circuits]
- A61B5/0402D . . . [N: Physical templates or devices for measuring ECG waveforms, e.g. an electrocardiograph ruler or caliper ([A61B5/0452B](#) takes precedence)] [C1207]
- A61B5/0402F . . . [N: Preparing electrode site, e.g. by abrasion]
- A61B5/0402H . . . [N: Means for providing electrolyte, e.g. syringes]
- A61B5/0402K . . . [N: Generation of artificial ECG signals based on measured signals, e.g. to compensate for missing leads] [N1204]
- [N: **WARNING**
[N1207] Group [A61B5/402K](#) is not complete pending a reorganisation.
]
- A61B5/0404 . . . Hand-held devices
- A61B5/0408 . . . Electrodes specially adapted therefor (for foetal cardiography [A61B5/0448](#); for electroencephalograph signals [A61B5/0478](#); for electromyography [A61B5/0492](#))
- A61B5/0408B [N: attached by means of suction]
- A61B5/0408D [N: Multiple electrode holders ([A61B5/0428F](#), [A61B5/042D](#) take precedence)] [C0002]
- A61B5/0408F [N: using conductive adhesive means] [N9607]
- A61B5/0416 connected by means of snap fasteners
- A61B5/042 for introducing into the body
- A61B5/042B [N: Endotracheal, oesophageal or gastric probes]
- A61B5/042D [N: Multiple electrode holders]
- A61B5/0424 Protection against electrode failure

- A61B5/0428 . . . Input circuits specially adapted therefor
- A61B5/0428B [N: using insulating or floating elements, e.g. transformers, opto-couplers (transformers for specific applications [H01F38/00](#); amplifiers H03F; optocouplers [H04B10/80](#))] [C1207]
- A61B5/0428D [N: Capacitive or ionised electrodes, e.g. MOSFET]
- A61B5/0428F [N: Patient cord assembly, e.g. cable harness]
- A61B5/0428H [N: Switching circuits]
- A61B5/0432 . . . Recording apparatus specially adapted therefor
- A61B5/0432B [N: using integrated circuit memory devices]
- A61B5/0436 Magnetic recording apparatus
- A61B5/0436B [N: Playback at speeds other than the recording speed]
- A61B5/044 . . . Displays specially adapted therefor [N: (arrangements for displaying electric variables or waveforms, e.g. cathode-ray oscilloscopes, [G01R13/00](#))]
- A61B5/0444 . . . Foetal cardiography
- A61B5/0448 Electrodes specially adapted therefor, e.g. scalp electrodes
- A61B5/0448B [N: attached by means of suction]
- A61B5/0452 . . . Detecting specific parameters of the electrocardiograph cycle
- A61B5/0452B [N: by template matching]
- A61B5/0456 Detecting R peaks, e.g. for synchronising diagnostic apparatus [N: (physiological signal analysis for synchronising or triggering a measurement or image acquisition [A61B5/72M8](#))] [C1207]
- A61B5/046 Detecting fibrillation
- A61B5/0464 Detecting tachycardia or brachycardia [C1207]
- A61B5/0468 Detecting abnormal ECG interval, [N: e.g. extrasystoles, ectopic heartbeats]
- A61B5/0472 Detecting abnormal QRS complex, [N: e.g. widening]
- A61B5/0476 . . Electroencephalography [N: (devices for psychotechnics [A61B5/16](#))]
- A61B5/0478 . . . Electrodes specially adapted therefor
- A61B5/048 . . . Detecting the frequency distribution of signals [N: (analysing frequency spectra in general [G01R23/00](#))]
- A61B5/0482 . . . using biofeedback [N: (biofeedback per se [A61B5/48S](#))] [C1207]
- A61B5/0484 . . . using evoked response
- A61B5/0484B [N: visually]
- A61B5/0484D [N: acoustically or auditory]
- A61B5/0484F [N: olfactory or gustatory]
- A61B5/0488 . . Electromyography
- A61B5/0488B [N: of genito-urinary organs]
- A61B5/0488D [N: Detecting gastro-intestinal contractions]
- A61B5/0488F [N: specially adapted for electroglottography or electropalatography]
- A61B5/0488H [N: Control of prosthetics]
- A61B5/0492 . . . Electrodes specially adapted therefor, e.g. needle electrodes
- A61B5/0496 . . Electro-oculography, e.g. detecting nystagmus [N: (measuring or inducing nystagmus [A61B5/48U](#))] [C1207]
- A61B5/05 . . Detecting, measuring or recording for diagnosis by means of electric currents or magnetic fields; [N: Measuring using microwaves or radiowaves] ([A61B5/02](#), [A61B5/04](#), [A61B5/11](#) take precedence) [C1112]

- A61B5/05M . . [N: using microwaves or terahertz waves] [N1112] [C1207]
- [N: **WARNING**
[N1207]Group [A61B5/05M](#) is not complete pending a reorganisation.
]
- A61B5/05P . . [N: Magnetic particle imaging] [N1112]
- A61B5/05T . . [N: Magnetic induction tomography] [N1112]
- A61B5/053 . . Measuring electrical impedance or conductance of a portion of the body [N0311]
[M1112]
- A61B5/053B . . . [N: Measuring skin impedance][N0311]
- A61B5/053B2 [N: specially adapted for acupuncture][N0311]
- A61B5/053B4 [N: Measuring galvanic skin response, e.g. by lie detector][N0311]
- A61B5/053D . . . [N: Testing vitality of teeth][N0311]
- A61B5/053F . . . [N: impedance plethysmography][N0311] [C1202]
- A61B5/053H . . . [N: Impedance imaging, e.g. by tomography][N0311]
- A61B5/053J . . . [N: Measuring body composition by impedance, e.g. tissue hydration or fat
content][N0311]
- A61B5/053N . . . [N: invasively, e.g. using a catheter] [N1112]
- A61B5/055 . . involving electronic or nuclear magnetic resonance, e.g. magnetic resonance
imaging (arrangements or instruments for measuring magnetic variables involving
electronic or nuclear magnetic resonance, in general [G01R33/20](#))
- A61B5/055B . . . [N: Means for positioning of patients (for radiation diagnosis or therapy
[A61B6/04](#))]
- A61B5/06 . . Devices, other than using radiation, for detecting or locating foreign bodies (or
removing same [A61B17/50](#)); [N: determining position of probes within or on the body
of the patient] [C1207]
- A61B5/06C . . [N: Determining position of a probe within the body employing means separate
from the probe, e.g. sensing internal probe position employing impedance
electrodes on the surface of the body ([A61B1/00P7](#) takes precedence)] [N1110]
[C1207]
- [N: **WARNING**
[N1110] [A61B5/06C](#) and subgroups are not complete pending a reorganisation,
see also group(s) [A61B5/06](#)
]
- A61B5/06C1 . . . [N: using magnetic field] [N1110]
- A61B5/06C2 . . . [N: using impedance measurements] [N1110]
- A61B5/06C3 . . . [N: using markers ([A61B5/06C1](#) takes precedence)] [N1110]
- A61B5/06E . . [N: Determining position of the probe employing exclusively positioning means
located on or in the probe e.g. using position sensors arranged on the probe]
[N1110]
- [N: **WARNING**
[N1110] [A61B5/06E](#) and subgroups are not complete pending a reorganisation,
see also group [A61B5/06](#)
]
- A61B5/06E1 . . . [N: Superposing sensor position on an image of the patient, e.g. obtained by
ultrasound or x-ray imaging] [N1110] [C1207]
- A61B5/06E2 . . . [N: using accelerometers or gyroscopes] [N1202]

- A61B5/06E3 . . . [N: using impedance sensors] [N1202]
- A61B5/07 . Endoradiosondes
- A61B5/07B . . [N: Intestinal transmitters]
- A61B5/07D . . [N: Permanent implantations (telemetry using implanted circuitry [A61B5/00B9](#); implanted stimulators for therapy [A61N1/362](#), [A61N1/372](#)) [C1207]
- A61B5/08 . Detecting, measuring or recording devices for evaluating the respiratory organs ([A61B5/0205](#) takes precedence)
- A61B5/08B . . [N: Recording apparatus specially adapted therefor]
- A61B5/08F . . [N: by whole-body plethysmography (measuring blood flow using plethysmography [A61B5/0295](#); impedance plethysmography [A61B5/053](#); measuring volume of the body or parts thereof [A61B5/107C](#))] [C1207]
- A61B5/08J . . [N: by impedance pneumography]
- A61B5/08N . . [N: Measurement of pulmonary parameters by tracers, e.g. radioactive tracers]
- A61B5/08R . . [N: Measuring devices for examining respiratory frequency (measuring frequency of electric signals [G01R23/00](#))]
- A61B5/08S . . [N: Evaluation by breath analysis, e.g. determination of the chemical composition of exhaled breath ([A61B5/083](#), [A61B5/091](#) take precedence)] [N1110]
- [N: **WARNING**
[N1110] Group [A61B5/08S](#) is not complete pending a reorganisation, see also group [A61B5/083](#)
]
- A61B5/08T . . [N: Detecting or evaluating cough events] [N1110]
- [N: **WARNING**
Group [A61B5/08T](#) is not complete pending a reorganisation, see also group/s [A61B5/08](#)
]
- A61B5/08U . . [N: Detecting or evaluating apnoea events ([A61B5/48C8](#) takes precedence)] [N1110]
- [N: **WARNING**
[N1110]Group [A61B5/08U](#) is not complete pending a reorganisation, see also group [A61B5/08](#)
]
- A61B5/083 . . Measuring rate of metabolism by using breath test, e.g. measuring rate of oxygen consumption
- A61B5/083B . . . [N: Measuring rate of oxygen consumption]
- A61B5/083D . . . [N: Measuring rate of [CO2](#) production]
- A61B5/085 . . Measuring impedance of respiratory organs or lung elasticity
- A61B5/087 . . Measuring breath flow
- A61B5/087B . . . [N: Peak expiratory flowmeters]
- A61B5/087D . . . [N: using optical means]
- A61B5/087F . . . [N: using means carried by the fluid stream, e.g. free floating balls]
- A61B5/087H . . . [N: using means deflected by the fluid stream, e.g. flaps]
- A61B5/087J . . . [N: using temperature sensing means]
- A61B5/09 . . . using an element rotated by the flow [N: (toys actuated by air current [A63H33/40](#))]

- A61B5/091 . . . Measuring volume of inspired or expired gases, e.g. to determine lung capacity
- A61B5/093 the gases being exhaled into, or inhaled from, an expansible chamber, e.g. bellows or expansible bag
- A61B5/093B [N: Recording apparatus specially adapted therefor]
- A61B5/095 within a rigid container, e.g. the boundary being formed by a liquid surface
- A61B5/097 . . . Devices for facilitating collection of breath or for directing breath into or through measuring devices

- A61B5/103 . . . Detecting, measuring or recording devices for testing the shape, pattern, [N: colour,] size or movement of the body or parts thereof, for diagnostic purposes ([A61B5/08](#) takes precedence; measuring aids for tailors [A41H1/00](#); measuring instruments specially adapted for dentistry [A61C19/04](#)) [C1202]
- A61B5/103A [N: Determining colour for diagnostic purposes (measuring colour in general [G01J3/46](#))] [N1202] [C1207]
- A61B5/103A2 [N: by means of colour cards] [N1202]
- A61B5/103P [N: Measuring load distribution, e.g. podologic studies] [C1202]
- A61B5/103P2 [N: Measuring plantar pressure during gait] [C1202]
- A61B5/107 . . . Measuring physical dimensions, e.g. size of the entire body or parts thereof
- A61B5/107A [N: measuring angles, e.g. using goniometers ([A61B5/11T](#) takes precedence)] [N1202]
- A61B5/107B [N: measuring distances on the body, e.g. measuring length, height or thickness ([A61B5/107J](#) takes precedence)] [C1202]
- A61B5/107C [N: Measuring volume, e.g. of limbs] [N1202]
- A61B5/107D [N: Foot measuring devices]
- A61B5/107H [N: for measuring dimensions by non-invasive methods, e.g. for determining thickness of tissue layer ([A61B8/08J](#) takes precedence)]
- A61B5/107J [N: for measuring dimensions inside body cavities, e.g. using catheters ([A61B3/10B](#) takes precedence)] [C1207]
- A61B5/107L [N: Measuring of profiles]
- A61B5/107L2 [N: by moulding]
- A61B5/107P [N: using optical or photographic means] [N1204]
- A61B5/11 . . . Measuring movement of the entire body or parts thereof, e.g. head or hand tremor, mobility of a limb (for measuring pulse [A61B5/02](#)) [N: ([A61B5/103P2](#) takes precedence; motion detection to correct for motion artifacts in physiological signals [A61B5/72B2B](#))] [C1207]
- A61B5/11B [N: Detecting tremor]
- A61B5/11D [N: Ballistocardiography]
- A61B5/11F [N: Detecting eye twinkling]
- A61B5/11H [N: induced by stimuli or drugs; ([A61B5/11D](#) takes precedence; investigating medicinal preparations [G01N33/15](#))] [C9711]
- A61B5/11H2 [N: of laboratory animals, e.g. activity] [N9711]
- A61B5/11H4 [N: to assess neuromuscular blockade, e.g. to estimate depth of anaesthesia] [N9711]
- A61B5/11J [N: Measuring contraction of parts of the body, e.g. organ, muscle ([A61B5/22](#) takes precedence; apparatus for measuring work or force in general [G01L](#))]
- A61B5/11J2 [N: of excised organs, e.g. muscle preparations]
- A61B5/11J4 [N: of wounds, e.g. at the operation site]

- A61B5/11L . . . [N: Detecting tooth mobility] [N9507]
- A61B5/11M . . . [N: Global tracking of patients, e.g. by using GPS] [N1109]
- A61B5/11N . . . [N: Local tracking of patients, e.g. in a hospital or private home] [N1109]
- A61B5/11N2 [N: Tracking parts of the body] [N1109]
- A61B5/11N4 [N: Monitoring leaving of a patient support, e.g. a bed or a wheelchair] [N1206] [C1207]
- A61B5/11P . . . [N: Determining posture transitions] [N1109]
- A61B5/11P2 [N: Fall detection] [N1109]
- A61B5/11Q . . . [N: Determining activity level] [N1109]
- A61B5/11R . . . [N: Gait analysis] [N1109]
- A61B5/11S . . . [N: Determining geometric values, e.g. centre of rotation or angular range of movement] [N1109]
- A61B5/11S2 [N: of movement trajectories] [N1202]
- A61B5/11T . . . [N: Discriminating type of movement, e.g. walking or running ([A61B5/11P](#), [A61B5/11R](#) take precedence)] [N1109]
- A61B5/11U . . . [N: Determining motor skills] [N1109]
- A61B5/11U2 [N: Grasping motions of hands] [N1109]
- A61B5/11W . . . [N: using a particular sensing technique] [N1109]
- A61B5/11W2 [N: using markers] [N1109]
- A61B5/11W4 [N: using image analysis ([A61B5/11W2](#) takes precedence)] [N1109]
- A61B5/113 . . . occurring during breathing
- A61B5/113B [N: by monitoring thoracic expansion]
- A61B5/117 . . . Identification of persons, e.g. finger-printing, foot-printing, impression techniques (dental impression cups or articulators [A61C9/00](#), [A61C11/00](#); recognition of data [G06K](#); recognising finger-prints [G06K9/00](#); identification tags [G09F3/00](#))
- A61B5/117B . . . [N: Finger-printing]
- A61B5/117D . . . [N: Foot-printing]
- A61B5/117F . . . [N: Recognition of faces] [C1207]
- A61B5/117H . . . [N: Recognition by dental data]
- A61B5/12 . . . Audiometering [N: Evaluation or the auditory system, not limited to hearing capacity ([A61B5/0484D](#), [A61B5/40B8](#) take precedence)] [C1207]
- A61B5/12D . . . [N: evaluating hearing capacity] [N1202]
- A61B5/12D2 [N: subjective methods] [N1202]
- A61B5/12D4 [N: objective methods] [N1202]
- A61B5/12D4B [N: measuring compliance or mechanical impedance of the tympanic membrane] [N1202]
- A61B5/12F . . . [N: evaluating tinnitus] [N1202]
- A61B5/14 . . . [N: IPC6] Devices for taking samples of blood (hypodermic syringes [A61M5/00](#)); Measuring characteristics of blood in vivo, e.g. gas concentration within the blood, pH-value of blood (measuring of blood pressure [A61B5/02](#); non-radiation detecting or locating of foreign bodies in blood [A61B5/06](#)) [C0801]

[N: WARNING]

This group and its subgroups are no longer used for the classification of new

documents as from April 1st, 2010. The backlog of these group is being continuously reclassified to [A61B5/15](#) and subgroups [N1004]

- A61B5/14B . . [N: Devices for taking blood samples (devices for taking samples of other body liquids [A61B10/00L](#))]
- A61B5/14B2 . . . [N: by percutaneous method, e.g. by lancet]
- A61B5/14B4 . . . [N: by syringes containing more than one piston (medical syringes in general [A61M5/178](#))]
- A61B5/14B6 . . . [N: provided with indicating means, e.g. for vein entry]
- A61B5/14B8 . . . [N: Multiple blood sampling, e.g. at periodic or pre-established intervals]
- A61B5/14B10 . . . [N: provided with locking means (details of syringes [A61M5/315](#))]
- A61B5/14B12 . . . [N: using pre-evacuated means]
- A61B5/14B12B [N: Safety means, e.g. for locking cannula (Removing or disposing of used needles or syringes [A61M5/32C](#))] [N9902]

- A61B5/145 . Measuring characteristics of blood in vivo, e.g. gas concentration, pH value; [N: Measuring characteristics of body fluids or tissues, e.g. interstitial fluid, cerebral tissue] (measuring of blood pressure or blood flow [A61B5/02](#); non-radiation detecting or locating of foreign bodies in blood [A61B5/06](#)) [N1102]
- [N: **WARNING**
[N1112] Groups [A61B5/145H](#), [A61B5/145J](#) and [A61B5/145P](#) are not complete pending a reorganisation; see also groups [A61B5/145](#)]
- A61B5/145B . . [N: invasive, e.g. introduced into the body by a catheter or needle or using implanted sensors ([A61B5/1459](#), [A61B5/1464](#), [A61B5/1473](#), [A61B5/1482](#), [A61B5/1486B](#) take precedence)] [N1102]
- A61B5/145D . . [N: specially adapted for measuring characteristics of body fluids other than blood (devices for taking samples of body liquids [A61B10/00L](#))] [N1112] [C1207]
- A61B5/145D2 . . . [N: for interstitial fluid] [N1112]
- A61B5/145D2B [N: using means for aiding extraction of interstitial fluid, e.g. microneedles or suction] [N1204]
- A61B5/145D4 . . . [N: for sweat] [N1112]
- A61B5/145D4B [N: using means for promoting sweat production, e.g. heating the skin (measuring sweat secretion [A61B5/42M2](#))] [N1204]
- A61B5/145F . . [N: using microdialysis] [N1204]
- A61B5/145F2 . . . [N: invasively] [N1204]
- A61B5/145G . . [N: for measuring glucose, e.g. by tissue impedance measurement] [N1102]
- A61B5/145H . . [N: for measuring haematocrit] [N1112]
- A61B5/145J . . [N: for measuring pH] [N1112]
- A61B5/145N . . [N: for measuring blood gases ([A61B5/1455N](#) takes precedence)] [N1102]
- A61B5/145P . . [N: for measuring analytes not otherwise provided for, e.g. ions, cytochromes] [N1112]
- A61B5/1455 . . using optical sensors, e.g. spectral photometrical oximeters [N1102]
- A61B5/1455N . . . [N: for measuring blood gases] [N1102]
- A61B5/1455N2 [N: Details of sensors specially adapted therefor] [N1102]
- A61B5/1455N4 [N: specially adapted for cerebral tissue] [N1102]

- A61B5/1455N6 [N: specially adapted for the eye fundus] [N1102]
 - A61B5/1455N8 [N: by fluorescence ([A61B5/1455N6](#) takes precedence)] [N1102]
 - A61B5/1455N10 [N: specially adapted to extracorporeal circuits] [N1102]
 - A61B5/1455P [N: by polarisation] [N1102]
 - A61B5/1459 invasive, e.g. introduced into the body by a catheter [N: ([A61B5/1464](#) takes precedence)] [N1102]
 - A61B5/1464 specially adapted for foetal tissue [N1102]
 - A61B5/1468 using chemical or electrochemical methods, e.g. by polarographic means [N: ([A61B5/1486](#) takes precedence)] [N1102]
 - A61B5/1473 invasive, e.g. introduced into the body by a catheter [N: ([A61B5/1482](#) takes precedence)] [N1102]
 - A61B5/1473B [N: comprising an immobilised reagent] [N1112]
 - A61B5/1477 non-invasive [N1102]
 - A61B5/1482 specially adapted for foetal tissue [N1102]
 - A61B5/1486 using enzyme electrodes, e.g. with immobilised oxidase [N1102]
 - A61B5/1486B [N: invasive, e.g. introduced into the body by a catheter or needle or using implanted sensors] [N1102] [M1112]
 - A61B5/1491 Heated applicators [N1102]
 - A61B5/1495 Calibrating or testing of in-vivo probes [N1102]
 - A61B5/15 Devices for taking samples of blood ([hypodermic syringes A61M5/178](#)) [N1004]
- [N: **WARNING** [N1004]
This group and its subgroups are not complete pending a reorganisation. See also [A61B5/14](#), [A61B5/14B](#) and subgroups
]
- [N: **Notes**
[N1207] In these subgroups, the following terms are used with the meaning indicated:
- "piercing element" means skin penetrating component e.g. blade, needle, lancet, laser beam; - "piercing or lancing device" means device ready to be used for lancing; - "driving device" means device for driving a piercing element e.g. spring
]
- A61B5/15B [N: Details] [N1204]
 - A61B5/15B2 [N: Source of blood] [N1204]
 - A61B5/15B2B [N: for capillary blood or interstitial fluid] [N1204]
 - A61B5/15B2D [N: for venous or arterial blood] [N1204]
 - A61B5/15B2E [N: for blood from umbilical cord] [N1204]
 - A61B5/15B2G [N: for blood from vagina, placenta, colon or mouth] [N1204]
 - A61B5/15B4 [N: for enhanced collection of blood or interstitial fluid at the sample site, e.g. by applying compression, heat, vibration, ultrasound, suction or vacuum to tissue; for reduction of pain or discomfort; Skin piercing elements, e.g. blades, needles, lancets or canulas, with adjustable piercing speed] [N1204]
 - A61B5/15B4B [N: Means for enhancing collection] [N1204]
 - A61B5/15B4B2 [N: by tissue compression, e.g. with specially designed surface of device contacting the skin area to be pierced] [N1204]
 - A61B5/15B4B4 [N: by heating] [N1204]
 - A61B5/15B4B6 [N: by vibration, e.g. ultrasound] [N1204]

A61B5/15B4B8	. . . . .	[N: by electricity] [N1204]
A61B5/15B4B10	. . . . .	[N: by negative pressure, other than vacuum extraction into a syringe by pulling on the piston rod or into pre-evacuated tubes] [N1204]
A61B5/15B4D	. . . . .	[N: Means for reducing pain or discomfort applied before puncturing; desensitising the skin at the location where body is to be pierced] [N1204]
A61B5/15B4D2	. . . . .	[N: by tissue compression, e.g. with specially designed surface of device contacting the skin area to be pierced] [N1204]
A61B5/15B4D4	. . . . .	[N: by heating] [N1204]
A61B5/15B4D6	. . . . .	[N: by cooling] [N1204]
A61B5/15B4D8	. . . . .	[N: by vibration (enhancing collection by vibration A61B5/15B6)] [N1204]
A61B5/15B4D10	. . . . .	[N: by negative pressure, e.g. suction, vacuum] [N1204]
A61B5/15B4D12	. . . . .	[N: by an adequate mechanical impact on the puncturing location] [N1204]
A61B5/15B4D14	. . . . .	[N: by accessories for bringing the piercing element into the body, e.g. through rotation of the piercing element] [N1204]
A61B5/15B4F	. . . . .	[N: Adjustable piercing speed of skin piercing element e.g. blade, needle, lancet or canula, for example with varying spring force or pneumatic drive] [N1204]
A61B5/15B6	. . . . .	[N: Adjustment of penetration depth] [N1204]
A61B5/15B6B	. . . . .	[N: Depth adjustment mechanism using end caps mounted at the distal end of the sampling device, i.e. the end-caps are adjustably positioned relative to the piercing device housing for example by rotating or screwing] [N1204]
A61B5/15B6D	. . . . .	[N: Depth adjustment mechanism using movable stops located inside the piercing device housing and limiting the travel of the drive mechanism (mechanisms using distal end caps A61B5/15B6B, mechanisms at the piercing element carrier proximal end A61B5/15B6F)] [N1204]
A61B5/15B6F	. . . . .	[N: Depth adjustment mechanism at the proximal end of the carrier of the piercing element] [N1204]
A61B5/15B8	. . . . .	[N: Construction or design features not otherwise provided for; manufacturing or production; packages; sterilisation of piercing element, piercing device or sampling device] [N1204]
A61B5/15B8B	. . . . .	[N: Venting means] [N1204]
A61B5/15B8D	. . . . .	[N: Valves] [N1204]
A61B5/15B8F	. . . . .	[N: Pumps for assisting the blood sampling] [N1204]
A61B5/15B8H	. . . . .	[N: Pistons, i.e. cylindrical bodies that sit inside the syringe barrel, typically with an air tight seal, and slide in the barrel to create a vacuum or to expel blood] [N1204]
A61B5/15B8J	. . . . .	[N: Rods for actuating or driving the piston i.e. the cylindrical body that sits inside the syringe barrel, typically with an air tight seal, and slides in the barrel to create a vacuum or to expel blood] [N1204]
A61B5/15B8L	. . . . .	[N: Collection chamber divided into at least two compartments, e.g. for division of samples (injection syringes having more than one chamber A61M5/19; syringes for injection of two or more media A61M5/24M, A61M5/28M; sample preparation for further analysis A61B5/15B26)] [N1204]
A61B5/15B8N	. . . . .	[N: Improved gripping, e.g. with high friction pattern or projections on the housing surface or an ergonomic shape] [N1204]
A61B5/15B8P	. . . . .	[N: Modular design or construction, i.e. subunits are assembled separately before being joined together or the device comprises interchangeable or detachable modules] [N1204]
A61B5/15B8R	. . . . .	[N: Manufacture or production processes or steps for blood sampling

		devices] [N1204]
A61B5/15B8R2	. . . . .	[N: for piercing elements e.g. blade, lancet, canula, needle] [N1204]
A61B5/15B8R4	. . . . .	[N: for driving devices i.e. means for driving the piercing element] [N1204]
A61B5/15B8R6	. . . . .	[N: for piercing devices i.e. devices ready to be used for lancing or piercing (for piercing elements A61B5/15B8R2, for driving devices A61B5/15B8R4)] [N1204]
A61B5/15B8T	. . . . .	[N: Packages specially adapted for piercing devices or blood sampling devices (kits for diabetes A61M5/00P2; packaging in general B65D)] [N1204]
A61B5/15B8V	. . . . .	[N: Sterilisation of piercing elements, piercing devices or sampling devices (piercing element stocking means, e.g. cartridges, A61B5/151M2F)] [N1204]
A61B5/15B8V2	. . . . .	[N: by heating] [N1204]
A61B5/15B8V4	. . . . .	[N: by aseptic fluid] [N1204]
A61B5/15B8V6	. . . . .	[N: by radiation] [N1204]
A61B5/15B10	. . . . .	[N: Collection vessels for collecting blood samples from the skin surface, e.g. test tubes, cuvettes (test tubes in general B01L3/14, sampling from within body cavities A61B5/15B2, A61B5/15B2G)] [N1204]
A61B5/15B12	. . . . .	[N: Caps, stoppers or lids for sealing or closing a blood collection vessel or container e.g. a test-tube or syringe barrel (caps for bottles or containers in general B65D41/00)] [N1204]
A61B5/15B14	. . . . .	[N: Strips for collecting blood, e.g. absorbent (optical reagent test strips G01N21/86B; chemical reagent test strips G01N33/487E, G01N33/52)] [N1204]
A61B5/15B16	. . . . .	[N: Blood collection bags, e.g. connected to the patient by a catheter comprising means for removing a small sample of collected blood from the bag (collection bags as such A61J1/00T, A61M1/00E2B)] [N1204]
A61B5/15B18	. . . . .	[N: Details of piercing elements or protective means for preventing accidental injuries by such piercing elements (double-ended hollow needles A61B5/15B18B8, A61B5/15B18B2; single-ended hollow needles A61B5/15B18B10, A61B5/15B18B2)] [N1204]
A61B5/15B18B	. . . . .	[N: Design of piercing elements] [N1204]
A61B5/15B18B2	. . . . .	[N: Hollow piercing elements, e.g. canulas, needles, for piercing the skin] [N1204]
A61B5/15B18B2B	. . . . .	[N: Specific tip design e.g. for improved penetration characteristics] [N1204]
A61B5/15B18B2D	. . . . .	[N: Specific design of proximal end] [N1204]
A61B5/15B18B4	. . . . .	[N: Pointed piercing elements, e.g. needles, lancets for piercing the skin (blade-like piercing elements A61B5/15B18B6)] [N1204]
A61B5/15B18B4B	. . . . .	[N: comprising means for capillary action] [N1204]
A61B5/15B18B4D	. . . . .	[N: Specific tip design e.g. for improved penetration characteristics] [N1204]
A61B5/15B18B4F	. . . . .	[N: Specific design of proximal end] [N1204]
A61B5/15B18B6	. . . . .	[N: Blade-like piercing elements, e.g. blades, cutters, knives, for cutting the skin] [N1204]
A61B5/15B18B6B	. . . . .	[N: comprising means for capillary action] [N1204]
A61B5/15B18B6D	. . . . .	[N: Specific blade design e.g. for improved cutting and penetration characteristics] [N1204]
A61B5/15B18B6F	. . . . .	[N: Specific design of proximal end] [N1204]
A61B5/15B18B8	. . . . .	[N: Double-ended needles e.g. used with pre-evacuated sampling tubes (hollow piercing element tip design A61B5/15B18B2B; needle sets for

		catheters A61M25/06; needles for bringing media into the body A61M5/32)] [N1204]
A61B5/15B18B8B	. . . . .	[N: Details of construction of proximal end] [N1204]
A61B5/15B18B8D	. . . . .	[N: Details of construction of shaft] [N1204]
A61B5/15B18B8F	. . . . .	[N: Details of construction of hub i.e. element used to attach the double-ended needle to a piercing device or sampling device] [N1204]
A61B5/15B18B10	. . . . .	[N: Single-ended needles (hollow piercing element tip design A61B5/15B18B2B, needle sets for catheters A61M25/06, needles for bringing media into the body A61M5/32)] [N1204]
A61B5/15B18B10B	. . . . .	[N: Details of construction of shaft] [N1204]
A61B5/15B18B10D	. . . . .	[N: Details of construction of hub i.e. element used to attach the single-ended needle to a piercing device or sampling device] [N1204]
A61B5/15B18B12	. . . . .	[N: Curved or bent needles] [N1204]
A61B5/15B18D	. . . . .	[N: Design of protective means for piercing elements for preventing accidental needle sticks e.g. shields, caps, protectors, axially extensible sleeves, pivotable protective sleeves] [N1204]
A61B5/15B18D2	. . . . .	[N: Breakable protectors, e.g. caps, shields or sleeves, i.e. protectors separated destructively e.g. by breaking a connecting area] [N1204]
A61B5/15B18D2B	. . . . .	[N: Protectors removed by rotational movement e.g. torsion or screwing] [N1204]
A61B5/15B18D2D	. . . . .	[N: Protectors removed by bending] [N1204]
A61B5/15B18D2F	. . . . .	[N: Protectors removed by pulling or pushing] [N1204]
A61B5/15B18D4	. . . . .	[N: Pierceable protectors, e.g. shields, caps, sleeves or films, e.g. for hygienic purposes] [N1204]
A61B5/15B18D6	. . . . .	[N: Joining techniques used for protective means] [N1204]
A61B5/15B18D6B	. . . . .	[N: by friction fit] [N1204]
A61B5/15B18D6D	. . . . .	[N: by snap-lock (i.e. based on axial displacement)] [N1204]
A61B5/15B18D6F	. . . . .	[N: by rotation, e.g. bayonet or screw] [N1204]
A61B5/15B18D6H	. . . . .	[N: by material engagement e.g. welding, bonding] [N1204]
A61B5/15B18D6J	. . . . .	[N: Integrally moulded protectors, e.g. protectors simultaneously moulded together with a further component, e.g. a hub, of the piercing element] [N1204]
A61B5/15B18D6L	. . . . .	[N: by using additional parts e.g. clamping rings or collets] [N1204]
A61B5/15B18D8	. . . . .	[N: Protective sleeves which are axially extensible, e.g. sleeves connected to, or integrated in, the piercing or driving device; pivotable protective sleeves] [N1204]
A61B5/15B18D8B	. . . . .	[N: comprising means to impede repositioning of protection sleeve from covering to uncovering position] [N1204]
A61B5/15B18D8B2	. . . . .	{7 dots} [N: fully automatically triggered, i.e. the triggering of the protective sleeve does not require a deliberate action by the user such as terminating the contact with the patient's skin] [N1204]
A61B5/15B18D8B4	. . . . .	{7 dots} [N: semi-automatically triggered, i.e. in which the triggering of the protective sleeve requires a deliberate action by the user e.g. manual release of spring-biased extension means] [N1204]
A61B5/15B18D10	. . . . .	[N: Pivotable protective sleeves i.e. sleeves connected to, or integrated in, the piercing or driving device, and which are pivoted for covering or uncovering the piercing element] [N1204]
A61B5/15B18D10B	. . . . .	[N: comprising means to impede repositioning of protection sleeve from covering to uncovering position] [N1204]

A61B5/15B18D10B2	. . . . .	{7 dots} [N: fully automatically triggered, i.e. the triggering of the pivotable protective sleeve does not require a deliberate action by the user such as terminating the contact with the patient's skin] [N1204]
A61B5/15B18D10B4	. . . . .	{7 dots} [N: semi-automatically triggered, i.e. in which the triggering of the pivotable protective sleeve requires a deliberate action by the user such as manual release of spring-biased extension means] [N1204]
A61B5/15B18D12	. . . . .	[N: Procedure for removing protection means [N at the time of piercing] [N1204]
A61B5/15B18D12B	. . . . .	[N: fully automatically removed, i.e. the removing does not require any action by the user] [N1204]
A61B5/15B18D12D	. . . . .	[N: semi-automatically removed, i.e. before puncturing the protection is removed by a mechanism initiated by a deliberate action by the user, such as pressing a button] [N1204]
A61B5/15B18D12F	. . . . .	[N: manually removed] [N1204]
A61B5/15B18D12H	. . . . .	[N: removal procedure linked to further actions, e.g. cocking of the piercing device, which indicate that the piercing device is used or tempered] [N1204]
A61B5/15B20	. . . . .	[N: Needle holders, for instance for holding the needle by the hub, used for example with double-ended needle and pre-evacuated tube,] [N1204]
A61B5/15B22	. . . . .	[N: Needle sets comprising wings, e.g. butterfly type, for ease of handling] [N1204]
A61B5/15B24	. . . . .	[N: Having means for aiding positioning of the piercing device at a location where the body is to be pierced (means for aiding positioning of devices for bringing media into the body A61M5/42D, locating blood vessels A61B5/48Y2)] [N1204]
A61B5/15B26	. . . . .	[N: Blood sample preparation for further analysis, e.g. by separating blood components or by mixing] [N1204]
A61B5/15B28	. . . . .	[N: with identification means (identification means for surgical instruments A61B19/00A)] [N1204]
A61B5/15B28B	. . . . .	[N: characterized by physical shape] [N1204]
A61B5/15B28D	. . . . .	[N: having complementary physical shapes for indexing or registration purposes] [N1204]
A61B5/15B28F	. . . . .	[N: Optical identification systems e.g. bar codes, colour codes] [N1204]
A61B5/15B28H	. . . . .	[N: Electrical or magnetic identification means] [N1204]
A61B5/15B30	. . . . .	[N: Means for facilitating use e.g. by people with impaired vision; means for indicating when used correctly or incorrectly; means for alarming] [N1204]
A61B5/15B30B	. . . . .	[N: by audible feedback] [N1204]
A61B5/15B30D	. . . . .	[N: by tactile feedback e.g. vibration] [N1204]
A61B5/15B30F	. . . . .	[N: by visual feedback] [N1204]
A61B5/15B30H	. . . . .	[N: by topography of the surface e.g. Braille, embossed printing] [N1204]
A61B5/15B32	. . . . .	[N: Aesthetic features, e.g. distraction means to prevent fears of child patients] [N1204]
A61B5/15B34	. . . . .	[N: Communication to or from blood sampling device (transmitting measured data A61B5/00B)] [N1204]
A61B5/15B34B	. . . . .	[N: long distance, e.g. between patient's home and doctor's office] [N1204]
A61B5/15B34D	. . . . .	[N: intermediate range, e.g. within room or building] [N1204]
A61B5/15B34F	. . . . .	[N: short range, e.g. between console and disposable (using implanted

		devices A61B5/15B34H)] [N1204]
A61B5/15B34H	. . . .	[N: with implanted devices] [N1204]
A61B5/15B36	. . . .	[N: Preventing re-use] [N1204]
A61B5/15B36B	. . . .	[N: by indicating if used, tampered with, unsterile or defective] [N1204]
A61B5/15B36D	. . . .	[N: by disrupting a seal e.g. puncturing a piston seal] [N1204]
A61B5/15B36F	. . . .	[N: by disconnecting components e.g. breaking or rupturing of connected parts e.g. piston and rod] [N1204]
A61B5/15B36H	. . . .	[N: by blocking components e.g. piston, driving device or fluid passageway] [N1204]
A61B5/15B36J	. . . .	[N: by means for destroying components or parts e.g. by cutting or piercing] [N1204]
A61B5/15B36J2	. . . . .	[N: by including soluble parts] [N1204]
A61B5/15B36J4	. . . . .	[N: by blunting or disabling needle] [N1204]
A61B5/15B38	. . . .	[N: Means for varying, regulating, indicating or limiting the speed or time of blood collection] [N1204]
A61B5/15B40	. . . .	[N: Means for the detection of operative contact with patient e.g. by temperature sensitive sensor] [N1204]
A61B5/15B42	. . . .	[N: Means for the detection of the presence or absence of a module, a component or an abnormal condition; detection of leaks] [N1204]
A61B5/15D	. . . .	[N: Low-profile devices which resemble patches or plasters, e.g. also allowing collection of blood samples for testing] [N1204]
A61B5/15F	. . . .	[N: Arrays of piercing elements for simultaneous piercing] [N1204]
A61B5/15F2	. . . .	[N: Micro-needles or micro-blades] [N1204]
A61B5/15H	. . . .	[N: Blood sampling from a fluid line external to a patient, such as a catheter line, combined with an infusion line; blood sampling from indwelling needle sets, e.g. sealable ports, luer couplings, valves (tubing connectors and couplings A61M39)] [N1204]
A61B5/15I	. . . .	[N: Devices] specially adapted for taking samples of capillary blood, e.g. by lancets [N: , needles or blades] [N1004] [C1207]
A61B5/15IA	. . . .	[N: Details] [N1204]
A61B5/15IA2	. . . . .	[N: Piercing procedure] [N1204]
A61B5/15IA2B	. . . . .	[N: Purely manual piercing, i.e. the user pierces the skin without the assistance of any driving means or driving devices] [N1204]
A61B5/15IA2D	. . . . .	[N: Piercing being assisted by a triggering mechanism] [N1204]
A61B5/15IA2D2	. . . . .	[N: Fully automatically triggered, i.e. the triggering does not require a deliberate action by the user, e.g. by contact with the patient's skin] [N1204]
A61B5/15IA2D4	. . . . .	[N: Semi-automatically triggered, e.g. at the end of the cocking procedure, for instance by biasing the main drive spring or when reaching sufficient contact pressure, the piercing device is automatically triggered without any deliberate action by the user] [N1204]
A61B5/15IA2D6	. . . . .	[N: Manually triggered, i.e. the triggering requires a deliberate action by the user such as pressing a drive button] [N1204]
A61B5/15IA4	. . . . .	[N: Driving means for propelling the piercing element to pierce the skin, e.g. comprising mechanisms based on shape memory alloys, magnetism, solenoids, piezoelectric effect, biased elements, resilient elements, vacuum or compressed fluids] [N1204]
A61B5/15IA4B	. . . . .	[N: comprising biased elements, resilient elements or a spring e.g. a

		helical spring, leaf spring, or elastic strap] [N1204]
A61B5/151A4D	. . . . .	[N: comprising shape memory alloys] [N1204]
A61B5/151A4F	. . . . .	[N: comprising piezos] [N1204]
A61B5/151A4H	. . . . .	[N: comprising magnets or solenoids] [N1204]
A61B5/151A4J	. . . . .	[N: comprising a vacuum or compressed fluids] [N1204]
A61B5/151A6	. . . . .	[N: Means for controlling the lancing movement, e.g. 2D- or 3D-shaped elements, tooth-shaped elements or sliding guides] [N1204]
A61B5/151A6B	. . . . .	[N: comprising 2D- or 3D-shaped elements, e.g. cams, curved guide rails or threads (comprising tooth-shaped elements A61B5/151A6F)] [N1204]
A61B5/151A6D	. . . . .	[N: comprising linear sliding guides (comprising tooth-shaped elements A61B5/151A6F)] [N1204]
A61B5/151A6F	. . . . .	[N: comprising tooth-shaped elements, e.g. toothed wheel or rack and pinion] [N1204]
A61B5/151B	. . . . .	[N: Bladeless capillary blood sampling devices, i.e. devices for perforating the skin in order to obtain a blood sample but not using a blade, needle, canula, or lancet, e.g. by laser perforation, suction or pressurized fluids] [N1004] [C1207]
A61B5/151B2	. . . . .	[N: by use of radiation e.g. laser] [N1204]
A61B5/151B2B	. . . . .	[N: provided with means to ensure the protection of the user e.g. to avoid laser light entering the eyes of a user] [N1204]
A61B5/151B4	. . . . .	[N: by use of gaseous agents, e.g. using suction aspiration or pressurized gas] [N1204]
A61B5/151D	. . . . .	[N: Devices intended for single use, i.e. disposable] [N1004]
A61B5/151D2	. . . . .	[N: comprising driving means, e.g. a spring, for retracting the piercing unit into the housing] [N1204]
A61B5/151M	. . . . .	[N: Devices loaded with multiple lancets simultaneously, e.g. for serial firing without reloading, for example by use of stocking means. (multiple simultaneous cutting or piercing A61B5/1561)] [N1004] [C1207]
A61B5/151M2	. . . . .	[N: Constructional features of stocking means e.g. strip, roll, disc, cartridge, belt or tube] [N1204]
A61B5/151M2B	. . . . .	[N: Arrangement of piercing elements relative to each other] [N1204]
A61B5/151M2B2	. . . . .	[N: Each piercing element being stocked in a separate isolated compartment] [N1204]
A61B5/151M2B4	. . . . .	[N: Multiple piercing elements stocked in a single compartment] [N1204]
A61B5/151M2B6	. . . . .	[N: Piercing elements which are specially shaped or are provided with fittings or attachments to facilitate nesting, stacking or joining together end-to-end or side-by-side] [N1204]
A61B5/151M2D	. . . . .	[N: Geometry of stocking means or arrangement of piercing elements therein] [N1204]
A61B5/151M2D2	. . . . .	[N: Piercing elements stocked in or on a disc] [N1204]
A61B5/151M2D2B	. . . . .	{7 dots} [N: Characterized by propelling the piercing element in a radial direction relative to the disc] [N1204]
A61B5/151M2D2D	. . . . .	{7 dots} [N: Characterized by propelling the piercing element in an axial direction relative to the disc] [N1204]
A61B5/151M2D4	. . . . .	[N: Piercing elements stocked in or on a strip] [N1204]
A61B5/151M2D4B	. . . . .	{7 dots} [N: Characterized by a folded strip] [N1204]
A61B5/151M2D4D	. . . . .	{7 dots} [N: Characterized by a rolled strip] [N1204]
A61B5/151M2D4F	. . . . .	{7 dots} [N: Characterized by propelling the piercing element

- perpendicular to the direction of movement of the strip] [N1204]
- A61B5/151M2D4H {7 dots} [N: Characterized by propelling the piercing element parallel to the direction of movement of the strip] [N1204]
- A61B5/151M2D6 [N: Piercing elements stocked in the form of a stack or pile] [N1204]
- A61B5/151M2F [N: Stocking means comprising cap, cover, sheath or protection for aseptic stocking] [N1204]
- A61B5/151M2H [N: Stocking means comprising separate compartments or units for new and for used piercing elements (separate compartments for used piercing elements in piercing devices A61B5/151M8)] [N1204]
- A61B5/151M4 [N: Security or safety mechanism to be deactivated for forwarding next piercing element] [N1204]
- A61B5/151M6 [N: Means for keeping track or checking of the total number of piercing elements already used or the number of piercing elements still remaining in the stocking e.g. by check window, counter, display] [N1204]
- A61B5/151M8 [N: Piercing device comprising a separate compartment or unit for used piercing elements (separate compartments for used piercing elements in stocking means A61B5/151M2H)] [N1204]
- A61B5/151S [N: Devices loaded with a single lancet, i.e. a single lancet with or without a casing is loaded into a reusable drive device and then discarded after use; drive devices reloadable for multiple use] [N1004] [C1207]
- A61B5/151S2 [N: Constructional features of reusable driving devices] [N1204]
- A61B5/151S2B [N: comprising driving means, e.g. a spring, for propelling the piercing unit] [N1204]
- A61B5/151S2D [N: comprising driving means, e.g. a spring, for retracting the lancet unit into the driving device housing] [N1204]
- A61B5/151S2D2 [N: fully automatically retracted, i.e. the retraction does not require a deliberate action by the user, e.g. by terminating the contact with the patient's skin] [N1204]
- A61B5/151S2D4 [N: semi-automatically retracted, i.e. in which the retraction of the piercing unit requires a deliberate action by the user such as manual release of spring-biased retraction means] [N1204]
- A61B5/151S2D6 [N: purely manually retracted] [N1204]
- A61B5/153 [N: Devices] specially adapted for taking samples of venous or arterial blood e.g. with syringes [N1004] [C1207]
- A61B5/153B [N: comprising means for indicating vein entry] [N1204]
- A61B5/154 [N: Devices] using pre-evacuated means [N1004] [C1207]
- A61B5/154B [N: comprising means for indicating vein entry] [N1204]
- A61B5/155 [N: Devices] specially adapted for continuous or multiple sampling e.g. at predetermined intervals [N: (devices loaded with multiple lancets simultaneously A61B5/151M)] [N1004] [C1207]
- A61B5/157 [N: Devices] characterised by integrated means for measuring characteristics of blood [N1004] [C1207]
- A61B5/16 Devices for psychotechnics (testing capability [G09B1/00](#) to [G09B5/00](#)); Testing reaction times; [Devices for evaluating the psychological state] [C1112]
- [N: **WARNING**
[N1112] Groups [A61B5/16J](#) and [A61B5/16L](#) are not complete pending a reorganisation; see also group [A61B5/16](#)
]
- A61B5/16B [N: Flicker fusion testing (eye testing [A61B3/00](#))]

- A61B5/16D . . [N: Testing reaction times (reaction-time training with a substantial physical effort [A63B69/00N2](#); reaction-time games [A63F9/00R](#))]
- A61B5/16F . . [N: Lie detection] [N1112]
- A61B5/16H . . [N: Evaluating the state of mind, e.g. depression, anxiety] [N1112]
- A61B5/16J . . [N: Personality evaluation] [N1112]
- A61B5/16L . . [N: Evaluating attention deficit, hyperactivity] [N1112]
- A61B5/18 . . for vehicle drivers [N: or machine operators] [C1112]

- A61B5/20 . for measuring urological functions [N: restricted to the evaluation of the urinary system] ([A61B5/43M](#) takes precedence)[C1110]
- A61B5/20B . . [N: Assessing renal or kidney functions] [N1110]
 [N: **WARNING**
 [N1110]Group [A61B5/20B](#) is not complete pending a reorganisation, see also group [A61B5/20](#)
]
- A61B5/20D . . [N: Assessing bladder functions, e.g. incontinence assessment] [N1110] [C1202]
 [N: **WARNING**
 [N1110]Group [A61B5/20D](#) and subgroups are not complete pending a reorganisation, see also group [A61B5/20](#)
]
- A61B5/20D2 . . . [N: Determining bladder volume] [N1110]
- A61B5/20D3 . . . [N: Determining bladder or urethral pressure] [N1202]
- A61B5/20F . . [N: Sensing devices adapted to collect urine] [N1202]
- A61B5/20F2 . . . [N: adapted to determine urine quantity, e.g. flow, volume] [N1202]

- A61B5/22 . Ergometry; Measuring muscular strength or the force of a muscular blow ([N: [A61B5/11J](#) takes precedence; exercising apparatus [A63B21/00](#)]; measuring of work or force in general [G01L](#))
- A61B5/22B . . [N: Ergometry, e.g. by using bicycle type apparatus]
- A61B5/22B2 . . . [N: combined with detection or measurement of physiological parameters, e.g. heart rate]
- A61B5/22D . . [N: Measuring muscular strength]
- A61B5/22D2 . . . [N: of the fingers, e.g. by monitoring hand-grip force]
- A61B5/22D4 . . . [N: of constricting muscles, i.e. sphincters]
- A61B5/22D6 . . . [N: of masticatory organs, e.g. detecting dental force (measuring instruments for dentigraphy [A61C19/04](#))]

- A61B5/40 . [N: Detecting, measuring or recording for evaluating the nervous system ([A61B5/48C](#), [A61B5/48D](#), [A61B5/48E](#) take precedence)] [N1110]
 [N: **WARNING**
 [N1110] Group [A61B5/40](#) and subgroups are not complete pending a reorganisation, see also groups also groups [A61B5/00](#), [A61B5/02](#), [A61B5/0476](#), [A61B5/048](#), [A61B5/145](#), [A61B5/16](#), [A61B5/18](#).
]
- A61B5/40B . . [N: for evaluating the sensory system ([A61B5/12](#), [A61B5/40E](#) take precedence)] [N1110] [C1202]
- A61B5/40B2 . . . [N: Evaluating olfaction, i.e. sense of smell] [N1110]

- A61B5/40B4 . . . [N: Evaluating sense of taste] [N1110]
- A61B5/40B8 . . . [N: Evaluating sense of balance] [N1110]
- A61B5/40D . . [N: for evaluating the peripheral nervous systems ([A61B5/04B](#) takes precedence) [N1110]
- A61B5/40D4 . . . [N: Evaluating the autonomic nervous system] [N1110]
- A61B5/40D6 . . . [N: Evaluating nerves condition] [N1202]
- A61B5/40D6B [N: afferent nerves, i.e. nerves that relay impulses to the central nervous system] [N1202]
- A61B5/40D6D [N: efferent nerves, i.e. nerves that relay impulses from the central nervous system] [N1202]
- A61B5/40E . . [N: for evaluating the central nervous system ([A61B5/48C](#), [A61B5/48D](#) take precedence)] [N1202]
- A61B5/40E2 . . . [N: Evaluating the brain ([A61B5/03B](#), [A61B5/0476](#), [A51B5/1455N4](#) take precedence)] [N1202] [C1207]
- A61B5/40E4 . . . [N: Evaluating the spinal cord ([A61B5/48Y6](#) takes precedence)] [N1202]
- A61B5/40F . . [N: Diagnosing or monitoring particular conditions of the nervous system ([A61B5/48D](#), [A61B5/48E](#) take precedence)] [N1110][C1202]
- A61B5/40F2 . . . [N: Diagnosing or monitoring movement diseases, e.g. Parkinson, Huntington or Tourette] [N1110]
- A61B5/40F4 . . . [N: Diagnosing or monitoring cognitive diseases, e.g. Alzheimer, prion diseases or dementia] [N1110]
- A61B5/40F6 . . . [N: Diagnosing or monitoring seizure diseases, e.g. epilepsy] [N1110]

- A61B5/41 . . [N: Detecting, measuring or recording for evaluating the immune or lymphatic systems] [N1110]

- [N: **WARNING**
[N1110]Group [A61B5/41](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/02](#), [A61B5/04](#), [A61B5/05](#), [A61B5/145](#).
]

- A61B5/41B . . [N: Detecting or monitoring allergy or intolerance reactions to an allergenic agent or substance] [N1110]
- A61B5/41D . . [N: Detecting or monitoring sepsis] [N1110]
- A61B5/41F . . [N: Monitoring transplanted tissue or organ, e.g. for possible rejection reactions after a transplant] [N1110]
- A61B5/41J . . [N: Evaluating particular organs or parts of the immune or lymphatic systems] [N1202]
- A61B5/41J2 . . . [N: the glands, e.g. tonsils, adenoids or thymus] [N1202]
- A61B5/41J4 . . . [N: the spleen] [N1202]
- A61B5/41J6 . . . [N: the bone marrow] [N1202]
- A61B5/41J8 . . . [N: lymph vessels, ducts or nodes] [N1202]

- A61B5/42 . . [N: Detecting, measuring or recording for evaluating the gastrointestinal, the endocrine or the exocrine systems ([A61B1/00](#), [A61B5/48R](#), [A61B5/48T](#), [A61B5/48V](#), [A61B5/48W](#) take precedence)] [N1110] [C1202]

- [N: **WARNING**
[N1110]Group [A61B5/42](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/02](#), [A61B5/0488](#), [A61B5/145](#).
]

- A61B5/42B . . [N: Evaluating swallowing] [N1110]
- A61B5/42C . . [N: Diagnosing or evaluating reflux] [N1202]
- A61B5/42D . . [N: Diagnosing or evaluating gastrointestinal ulcers] [N1110]
- A61B5/42K . . [N: Evaluating particular parts, e.g. particular organs] [N1202]
- A61B5/42K2 . . . [N: endocrine glands, i.e. thyroid, adrenals, hypothalamic, pituitary] [N1202]
- A61B5/42K4 . . . [N: oesophagus] [N1202]
- A61B5/42K6 . . . [N: stomach] [N1202]
- A61B5/42K8 . . . [N: liver] [N1202]
- A61B5/42K10 . . . [N: pancreas] [N1202]
- A61B5/42K12 . . . [N: Intestines, colon or appendix] [N1202]
- A61B5/42M . . [N: Evaluating exocrine secretion production ([A61B3/10D](#) takes precedence)] [N1202]
- A61B5/42M2 . . . [N: sweat secretion] [N1202]
- A61B5/42M6 . . . [N: sebum secretion] [N1202]
- A61B5/42M8 . . . [N: saliva secretion] [N1202]
- A61B5/42M10 . . . [N: gastrointestinal secretions, e.g. bile production] [N1202]
- A61B5/42M12 . . . [N: mammary secretions] [N1202]
- A61B5/42M14 . . . [N: vaginal secretions] [N1202]

- A61B5/43 . [N: Detecting, measuring or recording for evaluating the reproductive systems] [N1110] [M1202]
- [N: **WARNING**
[N1110] Group [A61B5/43](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/02](#), [A61B5/04](#), [A61B5/05](#), [A61B5/053](#), [A61B5/103](#), [A61B5/11](#), [A61B5/145](#).
]
- A61B5/43F . . [N: for evaluating the female reproductive systems, e.g. gynaecological evaluations] [N1110]
- A61B5/43F2 . . . [N: Breast evaluation or disorder diagnosis ([A61B5/00P12F](#) takes precedence)] [N1110] [C1202]
- A61B5/43F3 . . . [N: Evaluation of the lower reproductive system ([A61B5/43F6](#) takes precedence)] [N1202]
- A61B5/43F3B [N: of the uterine cavities, e.g. uterus, fallopian tubes, ovaries] [N1202]
- A61B5/43F3D [N: of the cervix ([A61B5/43F6A](#) takes precedence)] [N1202]
- A61B5/43F3F [N: of the vagina] [N1202]
- A61B5/43F6 . . . [N: Pregnancy and labour monitoring, e.g. for labour onset detection] [N1110] [C1202]
- A61B5/43F6A [N: Assessing cervix alteration or dilation] [N1202]
- A61B5/43F6C [N: Assessing uterine contractions ([A61B5/03F](#) takes precedence)] [N1202]
- A61B5/43F6E [N: Assessing foetal parameters] [N1202]
- A61B5/43F8 [N: Sexual arousal evaluation] [N1110]
- A61B5/43M . . [N: for evaluating the male reproductive system] [N1110]
- A61B5/43M2 . . . [N: Prostate evaluation or disorder diagnosis] [N1110]
- A61B5/43M3 . . . [N: Testicles, seminal vesicles or sperm ducts evaluation] [N1202]

- A61B5/43M4 . . . [N: Sexual arousal or erectile dysfunction evaluation, e.g. tumescence evaluation] [N1110] [C1207]

- A61B5/44 . [N: Detecting, measuring or recording for evaluating the integumentary system, e.g. skin, hair or nails ([A61B5/117](#) takes precedence)] [N1110]

- [N: **WARNING**
[N1110] Group [A61B5/44](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/05](#), [A61B5/053](#), [A61B5/103](#), [A61B5/145](#), [A61B5/68](#): [A61B5/00](#), [A61B5/01](#), [A61B5/02](#), [A61B5/03](#), [A61B5/04](#), [A61B5/05](#), [A61B5/06](#), [A61B5/07](#), [A61B5/08](#), [A61B5/103](#), [A61B5/12](#), [A61B5/145](#), [A61B5/20](#), [A61B5/22](#)
]

- A61B5/44B . . [N: Skin evaluation, e.g. for skin disorder diagnosis] [N1110] [C1202]
- A61B5/44B2 . . . [N: Evaluating skin mechanical properties, e.g. elasticity, hardness, texture, wrinkle assessment] [N1110]
- A61B5/44B3 . . . [N: Evaluating skin constituents, e.g. elastin, melanin, water] [N1202]
- A61B5/44B4 . . . [N: Evaluating skin marks, e.g. mole, nevi, tumour, scar] [N1110]
- A61B5/44B6 . . . [N: Evaluating skin irritation or skin trauma, e.g. rash, eczema, wound, bed sore] [N1110] [M1202]
- A61B5/44B8 . . . [N: Scalp evaluation or scalp disorder diagnosis, e.g. dandruff] [N1110]
- A61B5/44B10 . . . specially adapted for aiding the prevention of ulcer or pressure sore development, i.e. before the ulcer or sore has developed [N1204]
- A61B5/44D . . [N: Hair evaluation, e.g. for hair disorder diagnosis] [N1110] [C1202]
- A61B5/44F . . [N: Nail evaluation, e.g. for nail disorder diagnosis] [N1110] [C1202]

- A61B5/45 . [N: For evaluating or diagnosing the musculoskeletal system or teeth ([A61B5/103P](#), [A61B5/107D](#), [A61B7/00H](#) take precedence)] [N1109]
- A61B5/45B . . [N: Bones ([A61B5/45R2B](#) takes precedence)] [N1109] [C1202]
- A61B5/45B4 . . . [N: Bone density determination] [N1109]
- A61B5/45D . . [N: Cartilage] [N1109]
- A61B5/45F . . [N: Muscles ([A61B5/0488](#), [A61B5/22D](#) take precedence)] [N1109]
- A61B5/45H . . [N: Tendons] [N1109]
- A61B5/45K . . [N: Joints ([A61B5/45M](#), [A61B5/45R](#) take precedence)] [N1109]
- A61B5/45M . . [N: Ligaments] [N1109]
- A61B5/45R . . [N: Evaluating a particular part of the musculoskeletal system or a particular medical condition] [N1202]
- A61B5/45R2 . . . [N: Evaluating the mouth, e.g. the jaw] [N1202]
- A61B5/45R2B [N: Evaluating teeth] [N1202]
- A61B5/45R2D [N: Evaluating soft tissue within the mouth, e.g. gums or tongue] [N1202]
- A61B5/45R2F [N: Evaluating bruxism] [N1202]
- A61B5/45R4 . . . [N: Evaluating static posture, e.g. undesirable back curvature ([A61B5/11P](#) takes precedence)] [N1202]
- A61B5/45R6 . . . [N: Evaluating the spine ([A61B5/45R4](#) takes precedence)] [N1203]
- A61B5/45R8 . . . [N: Evaluating the hip] [N1203]
- A61B5/45R10 . . . [N: Evaluating the shoulder] [N1203]
- A61B5/45R12 . . . [N: Evaluating the elbow] [N1203]
- A61B5/45R14 . . . [N: Evaluating the knee] [N1203]

- A61B5/45R16 . . . [N: Evaluating the wrist] [N1203]
- A61B5/45R18 . . . [N: Evaluating the ankle] [N1203]

- A61B5/48 . [N: Other medical applications] [N1109]
- A61B5/48B . . [N: Speech analysis specially adapted for diagnostic purposes] [N1109]
- A61B5/48C . . [N: Sleep evaluation ([A61B5/48D](#) takes precedence; devices for inducing sleep [A61M21/02](#))] [N1109]
- A61B5/48C2 . . . [N: Sleep detection, i.e. determining whether a subject is asleep or not] [N1109]
- A61B5/48C4 . . . [N: Detecting sleep stages or cycles] [N1109]
- A61B5/48C6 . . . [N: Sleep quality] [N1109]
- A61B5/48C8 . . . [N: Sleep apnoea] [N1109]
- A61B5/48D . . [N: Determining level or depth of anaesthesia ([A61B5/11H4](#) takes precedence)] [N1109]
- A61B5/48E . . [N: Touch or pain perception evaluation ([A61B5/48D](#) takes precedence)] [N1109] [C1203]
- A61B5/48E2 . . . [N: assessing touch sensitivity, e.g. for evaluation of pain threshold] [N1202]
- A61B5/48E2T [N: by thermal stimulation] [N1203]
- A61B5/48H . . [N: Assessment of subject's compliance to treatment] [N1109] [M1203]
- A61B5/48J . . [N: Diagnosis combined with treatment in closed-loop systems or methods] [N1109]
- A61B5/48J2 . . . [N: combined with drug delivery] [N1109]
- A61B5/48K . . [N: Monitoring progression or stage of a disease] [N1109]
- A61B5/48L . . [N: Toxicology, e.g. by detection of alcohol, drug or toxic products ([A61B5/48M](#) takes precedence)] [N1109] [C1203]
- A61B5/48M . . [N: Monitoring or testing the effects of treatment, e.g. of medication] [N1109] [C1203]
- A61B5/48P . . [N: Prosthesis assessment or monitoring ([A61B5/0488H](#) takes precedence)] [N1109]
- A61B5/48Q . . [N: Diagnosis based on concepts of traditional oriental medicine] [N1109]
- A61B5/48R . . [N: Indicating the phase of biorhythm (clocks or watches with indicators for biological cycles [G04B19/26B](#))] [N1109]
- A61B5/48S . . [N: Bio-feedback ([A61B5/0482](#) takes precedence)] [N1202]
- A61B5/48U . . [N: Measuring or inducing nystagmus] [N1109]
- A61B5/48V . . [N: Evaluating metabolism ([A61B5/083](#) takes precedence)] [N1109]
- A61B5/48W . . [N: Determining body composition] [N1109] [C1207]
- A61B5/48W2 . . . [N: Body fat] [N1109] [C1203]
- A61B5/48W4 . . . [N: Hydration status, fluid retention of the body] [N1109]
- A61B5/48W4B [N: Evaluating oedema] [N1109]
- A61B5/48W6 . . . [N: Determining interstitial fluid distribution or content within body tissue (measuring analytes in interstitial fluid in-vivo [A61B5/145D2](#))] [N1203] [C1207]
- A61B5/48X . . [N: inducing physiological or psychological stress, e.g. applications for stress testing] [N1109]
- A61B5/48Y . . [N: Locating particular structures in or on the body] [N1109]
- A61B5/48Y2 . . . [N: Blood vessels] [N1109]
- A61B5/48Y4 . . . [N: Nerves] [N1109]
- A61B5/48Y6 . . . [N: Epidural space] [N1109]

- A61B5/68 . [N: Arrangements of detecting, measuring or recording means, e.g. sensors, in relation to patient] [N1110]
- [N: **WARNING**
- [N1110] Group [A61B5/68](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/01](#), [A61B5/02](#), [A61B5/03](#), [A61B5/04](#), [A61B5/05](#), [A61B5/06](#), [A61B5/07](#), [A61B5/08](#), [A61B5/103](#), [A61B5/12](#), [A61B5/145](#), [A61B5/20](#), [A61B5/22](#)
-]
- A61B5/68B . . [N: specially adapted to be attached to or worn on the body surface] [N1110]
- A61B5/68B1 . . . [N: Sensor mounted on worn items] [N1110]
- A61B5/68B1B [N: Head-worn items, e.g. helmets, masks, headphones or goggles] [N1110]
- A61B5/68B1D [N: Garments; Clothes] [N1110]
- A61B5/68B1D1 [N: Vests] [N1110]
- A61B5/68B1D2 [N: Gloves] [N1110]
- A61B5/68B1D3 [N: Footwear] [N1110]
- A61B5/68B1F [N: Diapers] [N1110]
- A61B5/68B1H [N: Wristwatch-type devices] [N1110]
- A61B5/68B1J [N: External prosthesis] [N1110]
- A61B5/68B1K [N: Orthopaedic devices] [N1203]
- A61B5/68B2 [N: Specially adapted to be attached to a specific body part ([A61B5/68B1](#) takes precedence)] [N1110]
- A61B5/68B2B [N: Head] [N1110]
- A61B5/68B2B1 [N: Ear] [N1203]
- A61B5/68B2B1B [N: Ear lobe] [N1203]
- A61B5/68B2B1D [N: Ear canal] [N1203]
- A61B5/68B2B4 [N: Nose] [N1110]
- A61B5/68B2B5 [N: Mouth, e.g., oral cavity; tongue; Lips; Teeth] [N1110]
- A61B5/68B2B6 [N: Eye] [N1203]
- A61B5/68B2D [N: Neck] [N1110]
- A61B5/68B2F [N: Trunk, e.g., chest, back, abdomen, hip] [N1110]
- A61B5/68B2H [N: Arm or wrist] [N1110]
- A61B5/68B2J [N: Hand] [N1110]
- A61B5/68B2J1 [N: Finger] [N1110]
- A61B5/68B2L [N: Leg] [N1110]
- A61B5/68B2N [N: Foot or ankle] [N1110]
- A61B5/68B3 [N: Means for maintaining contact with the body ([A61B5/68B1](#) takes precedence)] [N1110]
- A61B5/68B3B [N: Straps, bands or harnesses] [N1110]
- A61B5/68B3D [N: using adhesives ([A61B5/0408F](#) takes precedence)] [N1110]
- A61B5/68B3D1 [N: Adhesive patches] [N1110]
- A61B5/68B3F [N: using vacuum] [N1110]
- A61B5/68B3H [N: Supports or holders, e.g., articulated arms] [N1110]
- A61B5/68B3J [N: Sutures] [N1110]

A61B5/68B3L	. . . .	[N: Clamps or clips] [N1110]
A61B5/68B3N	. . . .	[N: Anchoring means, e.g. barbs] [N1110]
A61B5/68B4	. . . .	[N: Indicating the position of the sensor on the body] [N1110]
A61B5/68B4B	. . . .	[N: by using templates] [N1110]
A61B5/68B4D	. . . .	[N: by marking the skin] [N1110]
A61B5/68B5	. . . .	[N: Monitoring or controlling sensor contact pressure] [N1110]
A61B5/68B6	. . . .	[N: Monitoring or controlling distance between sensor and tissue] [N1110]
A61B5/68D	. . . .	[N: specially adapted to be brought in contact with an internal body part, i.e. invasive] [N1110]
A61B5/68D1	. . . .	[N: mounted on an invasive device] [N1110]
A61B5/68D1B	. . . .	[N: Needles] [N1110]
A61B5/68D1B2	. . . . .	[N: in combination with a needle set] [N1110]
A61B5/68D1D	. . . .	[N: Microneedles] [N1110]
A61B5/68D1F	. . . .	[N: Guide wires] [N1110]
A61B5/68D1H	. . . .	[N: Catheters] [N1110]
A61B5/68D1H1	. . . . .	[N: with a balloon] [N1110]
A61B5/68D1H2	. . . . .	[N: with a distal curved tip] [N1110]
A61B5/68D1H3	. . . . .	[N: with a distal loop] [N1110]
A61B5/68D1H4	. . . . .	[N: with a distal pigtail shape] [N1110]
A61B5/68D1H5	. . . . .	[N: with a distal basket, e.g. expandable basket] [N1110]
A61B5/68D1H6	. . . . .	[N: with multiple distal splines] [N1110]
A61B5/68D1J	. . . .	[N: Permanently implanted devices, e.g. pacemakers, other stimulators, biochips (A61B5/68D1K takes precedence)] [N1110] [C1203]
A61B5/68D1K	. . . .	[N: Capsules, e.g. for swallowing or implanting] [N1110]
A61B5/68D1L	. . . .	[N: Stents] [N1110]
A61B5/68D1M	. . . .	[N: Burr holes] [N1110]
A61B5/68D1N	. . . .	[N: Access ports] [N1110]
A61B5/68D1P	. . . .	[N: Extracorporeal blood circuits, e.g. dialysis circuits] [N1110]
A61B5/68D2	. . . .	[N: specially adapted to be attached or implanted in a specific body part (A61B5/68D1 takes precedence)] [N1110]
A61B5/68D2A	. . . .	[N: Brain] [N1110]
A61B5/68D2B	. . . .	[N: Heart] [N1110]
A61B5/68D2C	. . . .	[N: Oesophagus] [N1110]
A61B5/68D2D	. . . .	[N: Stomach] [N1110]
A61B5/68D2E	. . . .	[N: Intestine] [N1110]
A61B5/68D2F	. . . .	[N: Bladder] [N1110]
A61B5/68D2G	. . . .	[N: Uterus] [N1110]
A61B5/68D2H	. . . .	[N: Blood vessel] [N1110]
A61B5/68D2J	. . . .	[N: Nerve] [N1110]
A61B5/68D2K	. . . .	[N: Bone] [N1110]
A61B5/68D3	. . . .	[N: Means for maintaining contact with the body (A61B5/68D1 takes precedence)] [N1110]
A61B5/68D3B	. . . .	[N: using adhesives] [N1110]

- A61B5/68D3D [N: Anchoring means] [N1110]
- A61B5/68D3F [N: Sutures] [N1110]
- A61B5/68D3H [N: Clamps or clips] [N1110]
- A61B5/68D5 [N: Monitoring or controlling sensor contact pressure] [N1110]
- A61B5/68D6 [N: Monitoring or controlling distance between sensor and tissue] [N1110]
- A61B5/68F . . . [N: mounted on external non-worn devices, e.g. non-medical devices] [N1110]
[M1203]
- A61B5/68F1 [N: Cabins] [N1110]
- A61B5/68F2 [N: Rooms] [N1110]
- A61B5/68F3 [N: Furniture] [N1110]
- A61B5/68F4 [N: Mats] [N1110]
- A61B5/68F5 [N: Cars] [N1110]
- A61B5/68F6 [N: Wheel chairs] [N1110]
- A61B5/68F7 [N: Sport equipment] [N1110]
- A61B5/68F8 [N: Toys] [N1110]
- A61B5/68F9 [N: Computer input devices, e.g. mice or keyboards] [N1110]
- A61B5/68F10 [N: Portable consumer electronic devices, e.g. music players, telephones, tablet computers] [N1110]

- A61B5/70 . . . [N: Means for positioning the patient in relation to the detecting, measuring or recording means] [N1110]

- [N: **WARNING**
[N1110] Group [A61B5/70](#) and subgroups are not complete pending a reorganisation, see also groups [A61B5/00](#), [A61B5/01](#), [A61B5/02](#), [A61B5/03](#), [A61B5/04](#), [A61B5/05](#), [A61B5/06](#), [A61B5/07](#), [A61B5/08](#), [A61B5/103](#), [A61B5/12](#), [A61B5/145](#), [A61B5/20](#), [A61B5/22](#)
]

- A61B5/70J . . . [N: Posture restraints] [N1110]
- A61B5/70K . . . [N: Tables] [N1110]
- A61B5/70L . . . [N: Indicia not located on the patient, e.g. floor marking] [N1110]
- A61B5/70N . . . [N: Breast positioning means] [N1203]

- A61B5/72 . . . [N: Signal processing specially adapted for physiological signals or for diagnostic purposes (algorithms for computer assisted diagnosis [G06F19/00M3](#); pattern recognition [G06K9/00](#))] [N1204]

- [N: **WARNING**
Group [A61B5/72](#) and subgroups are not complete pending a reorganisation; see also other subgroups of [A61B5/00](#)
]

- A61B5/72B . . . [N: for noise prevention, reduction or removal] [N1204]
- A61B5/72B2 [N: of noise induced by motion artifacts] [N1204]
- A61B5/72B2B [N: using a separate sensor to detect motion or using motion information derived from signals other than the physiological signal to be measured] [N1204]
- A61B5/72B2D [N: using signal cancellation, e.g. based on input of two identical physiological sensors spaced apart, or based on two signals derived from the same sensor, for different optical wavelengths] [N1204]

- A61B5/72B4 . . . [N: of noise originating from a therapeutic or surgical apparatus, e.g. from a pacemaker [\[N1204\]](#)]
- A61B5/72D . . [N: Determining signal validity, reliability or quality (A61B5/72B2 and A61B5/72B4 take precedence)] [\[N1204\]](#)
- A61B5/72F . . [N: Details of analog processing, e.g. isolation amplifier, gain or sensitivity adjustment, filtering, baseline or drift compensation ([A61B5/04J](#), [A61B5/04R](#), [A61B5/0428](#) take precedence; transformers for specific applications [H01F38/00](#); amplifiers [H03F](#))] [\[N1204\]](#)
- A61B5/72H . . [N: Signal modulation applied to the input signal sent to patient or subject; demodulation to recover the physiological signal (modulation [H03C](#))] [\[N1204\]](#)
- A61B5/72J . . [N: involving compression of the physiological signal, e.g. to extend the signal recording period [\[N1204\]](#)]
- A61B5/72K . . [N: Details of waveform analysis ([A61B5/0452](#) takes precedence)] [\[N1204\]](#)
- A61B5/72K2 . . . [N: using differentiation including higher order derivatives] [\[N1204\]](#)
- A61B5/72K4 . . . [N: using integration] [\[N1204\]](#)
- A61B5/72K6 . . . [N: using correlation, e.g. template matching or determination of similarity] [\[N1204\]](#)
- A61B5/72K8 . . . [N: using specific filters therefor, e.g. Kalman or adaptive filters ([A61B5/04R2](#) and [A61B5/04R4](#) take precedence)] [\[N1204\]](#)
- A61B5/72K10 . . . [N: characterised by using transforms] [\[N1204\]](#)
- A61B5/72K10B [N: using Fourier transforms] [\[N1204\]](#)
- A61B5/72K10D [N: using Wavelet transforms] [\[N1204\]](#)
- A61B5/72K12 . . . [N: Classification of physiological signals or data, e.g. using neural networks, statistical classifiers, expert systems or fuzzy systems (neural networks per se [G01N3/00](#); expert systems per se [G06N5/00](#))] [\[N1204\]](#)
- A61B5/72K12B [N: involving training the classification device] [\[N1204\]](#)
- A61B5/72M . . [N: Specific aspects of physiological measurement analysis ([A61B5/04R](#), [A61B5/0452](#) and [A61B5/048](#) take precedence)] [\[N1204\]](#)
- A61B5/72M2 . . . [N: Determining trends in physiological measurement data; Predicting development of a medical condition based on physiological measurements, e.g. determining a risk factor [\[N1204\]](#)]
- A61B5/72M4 . . . [N: Artificial waveform generation or derivation, e.g. synthesising signals from measured signals ([A61B5/0402K](#) takes precedence)] [\[N1204\]](#)
- A61B5/72M6 . . . [N: Event detection, e.g. detecting unique waveforms indicative of a medical condition ([A61B5/40F6](#), [A61B5/48C8](#), [A61B5/0452](#), [A61B5/08T](#) take precedence)] [\[N1204\]](#)
- A61B5/72M8 . . . [N: for synchronising or triggering a physiological measurement or image acquisition with a physiological event or waveform, e.g. an ECG signal ([A61B6/52B](#), [A61B6/54B](#), [A61B8/52B](#), [A61B8/54B](#) take precedence)] [\[N1204\]](#)
- A61B5/72M8B [N: Retrospective gating, i.e. associating measured signals or images with a physiological event after the actual measurement or image acquisition, e.g. by simultaneously recording an additional physiological signal during the measurement or image acquisition] [\[N1204\]](#)
- A61B5/72M8D [N: Prospective gating, i.e. predicting the occurrence of a physiological event for use as a synchronisation signal] [\[N1204\]](#)
- A61B5/72M10 . . . for compensation of signal variation due to stress unintentionally induced in the patient, e.g. due to the stress of the medical environment or examination (deliberately inducing physiological or psychological stress [A61B5/48X](#)) [\[N1204\]](#)

- A61B5/74
- [N: Details of notification to user or communication with user or patient (indicating measured values [G01D7/00](#)); user input means (input or output arrangements for computers [G06F3/00](#))] [N1204]
- [N: **WARNING**
Group [A61B5/74](#) and subgroups are not complete pending a reorganisation; see also other subgroups of [A61B5/00](#)
]
- A61B5/74B
- · [N: using sound] [N1204]
- A61B5/74B2
- · · [N: using synthesised speech] [N1204]
- A61B5/74B4
- · · [N: Sound rendering of measured values, e.g. by pitch or volume variation ([A61B5/74B2](#) takes precedence)] [N1204]
- A61B5/74D
- · [N: using visual displays ([A61B5/044](#) takes precedence)] [N1204]
- A61B5/74D2
- · · [N: Displaying combinations of multiple images regardless of image source, e.g. displaying a reference anatomical image with a live image (geometric transforms for image registration [G06T3/00R](#); enhancement using image fusion [G06T5/50](#); algorithms for registration of images [G06T7/00D1](#)] [N1204]
- A61B5/74D4
- · · [N: Displaying an image simultaneously with additional graphical information, e.g. symbols, charts, function plots] [N1204]
- A61B5/74D6
- · · [N: Displaying user selection data, e.g. icons in a graphical user interface] [N1204]
- A61B5/74D8
- · · [N: Displaying an avatar, e.g. an animated cartoon character] [N1204]
- A61B5/74D10
- · · [N: Display arrangements, e.g. multiple display units] [N1204]
- A61B5/74D12
- · · [N: using a holographic display] [N1204]
- A61B5/74F
- · [N: characterised by tactile indication, e.g. vibration or electrical stimulation] [N1204]
- A61B5/74H
- · [N: Alarms related to a physiological condition, e.g. details of setting alarm thresholds or avoiding false alarms (alarms per se [G08B](#))] [N1204]
- A61B5/74K
- · [N: Arrangements for interactive communication between patient and care services, e.g. by using a telephone network (telemetry of measured physiological signal [A61B5/00B](#))] [N1204]
- A61B5/74K2
- · · [N: in case of emergency, i.e. alerting emergency services] [N1204]
- A61B5/74M
- · [N: User input or interface means, e.g. keyboard, pointing device, joystick] [N1204]
- A61B5/74M2
- · · [N: Selection of a region of interest, e.g. using a graphics tablet] [N1204]
- A61B5/74M2B
- · · · [N: Automatic selection of region of interest] [N1204]
- A61B5/74M4
- · · [N: Voice-controlled interfaces] [N1204]
- A61B5/74M6
- · · [N: using a reader or scanner device, e.g. barcode scanner] [N1204]

A61B6/00

Apparatus for radiation diagnosis, e.g. combined with radiation therapy equipment (analysis of materials using radiation [G01N23/00](#), detecting hidden objects by radiation [G01V5/00D](#), radiodiagnostic or X-ray contrast preparations [A61K49/00](#); radiation therapy per se [A61N5/00](#); instruments measuring radiation intensity for application in the field of nuclear medicine, e.g. in vivo counting [G01T1/161](#); apparatus for taking X-ray photographs [G03B42/02](#); X-ray photographic processes [G03C5/16](#); irradiation devices [G21K](#); X-ray apparatus or circuits therefor [H05G1/00](#)) [C1207]

[N: WARNING

[N1207] Groups [A61B6/40](#) to [A61B6/58](#) do not correspond to former or current IPC groups. Concordance ECLA - IPC for these groups is as follows: - A61B 6/40 : A61B 6/00

- A61B 6/42 : A61B 6/00 - A61B 6/44 : A61B 6/00 - A61B 6/46 : A61B 6/00 - A61B 6/48 :
 A61B 6/00 - A61B 6/50 : A61B 6/00 - A61B 6/52 : A61B 6/00 - A61B 6/54 : A61B 6/00 -
 A61B 6/56 : A61B 6/00 - A61B 6/58 : A61B 6/00
]

- A61B6/02 . Devices for diagnosis sequentially in different planes; Stereoscopic radiation diagnosis [C1110]
- A61B6/02B . . [N: Stereoscopic imaging] [M1110]
- A61B6/02D . . [N: Tomosynthesis] [N1110]
- A61B6/02H . . [N: characterised by the use of a particular data acquisition trajectory, e.g. helical or spiral] [C1207]
- A61B6/03 . . Computerised tomographs ([N: diagnosis by magnetic resonance imaging [A61B5/055](#); echo-tomography [A61B8/14](#); [N: medical informatics [G06F19/00M](#)]) [M1110]
- A61B6/03B . . . [N: Transmission computed tomography (CT)] [M1110]
- A61B6/03B1 [N: Mechanical aspects of CT] [N1110]
- A61B6/03D . . . [N: Emission tomography (detector details for PET [G01T1/29D4](#), detector details for SPECT [G01T1/164B2](#))] [N1202]
- A61B6/04 . Positioning of patients; Tilttable beds or the like (operating tables [A61G13/00](#); operating chairs [A61G15/00](#))
- A61B6/04A . . [N: Tables or beds] [N1110]
- A61B6/04A2 . . . [N: Tables or beds with compression means] [N1110]
- A61B6/04A4 . . . [N: Tables or beds with immobilising means] [N1110]
- A61B6/04A4B [N: Patient cradles] [N1110]
- A61B6/04A6 . . . [N: Tables or beds with means for imaging suspended breasts] [N1110]
- A61B6/04A8 . . . [N: Tables or beds made from non-metallic materials] [N1110]
- A61B6/04A10 . . . [N: Tables or beds with heating or cooling means] [N1110]
- A61B6/04C . . [N: Servo-controlled positioning] [N1110]
- A61B6/04E . . [N: Supports mounted to ceiling] [N1110]
- A61B6/04G . . [N: Endless-band supports] [N1110]
- A61B6/04K . . [N: Patient positioning chairs] [N1110]
- A61B6/04M . . [N: Inflatable rests for lifting of patients] [N1110]
- A61B6/04P . . [N: using markers or indicia for aiding patient positioning] [N1110]
- A61B6/06 . Diaphragms [N: for particular diagnostic applications, e.g. tomography, i.e. not of general applicability (diaphragms, e.g. variable, or collimators in general [G21K1/02](#))]
- A61B6/08 . Auxiliary means for directing the radiation beam to a particular spot, e.g. using light beams
- A61B6/10 . Application or adaptation of safety means (protection against dangerous radiation in general [G21F](#))
- A61B6/10B . . [N: Protection against mechanical damage, e.g. anti-collision devices]
- A61B6/10B2 . . . [N: Braking or locking devices]
- A61B6/10D . . [N: Protection against radiation, e.g. shielding (techniques for handling radiation

not otherwise provided for [G21K](#)]

- A61B6/12 . Devices for detecting or locating foreign bodies ([A61B6/02](#) takes precedence; [N: radio-opaque markers [A61B19/00R](#)])
- A61B6/14 . Applications or adaptations for dentistry
- A61B6/14B . . [N: by intraoral means (X-ray tubes having a small cross-section to facilitate introduction into small cavities [H01J35/32](#))]
- A61B6/40 . [N: with arrangements for generating radiation specially adapted for radiation diagnosis (X-ray tubes or details thereof [H01J35/00](#))] [N1110]
- A61B6/40B . . [N: characterised by using a plurality of source units (circuit arrangements driving apparatuses comprising more than one X ray tube [H05G1/70](#))] [N1110]
- A61B6/40B2 . . . [N: arranged in multiple source-detector units] [N1110]
- A61B6/40D . . [N: involving movement of the focal spot] [N1110] [C1207]
- A61B6/40D2 . . . [N: resulting in acquisition of views from substantially different positions, e.g. EBCT] [N1110] [C1207]
- A61B6/40F . . [N: the source being combined with a filter or grating (filters for radiation per se [G21K1/10](#))] [N1110] [C1202]
- [N: **WARNING**
[N1110] Groups [A61B6/40F](#) and [A61B6/40F2](#) are not complete pending a reorganisation; see also [A61B6/03B14](#)
]
- A61B6/40F2 . . . [N: K-edge filters] [N1110]
- A61B6/40H . . [N: Source units adapted to modify characteristics of the beam during the data acquisition process ([A61B6/40D](#), [A61B6/40F](#) take precedence; arrangements changing the time structure of an already generated radiation beam [G21K1/04C](#))] [N1110]
- A61B6/40J . . [N: by using a source unit in the interior of the body ([A61B6/03D](#) takes precedence; X-ray tubes with small cross-section [H01J35/32](#))] [N1110] [C1202] [C1207]
- A61B6/40L . . [N: adapted for producing a particular type of beam] [N1110]
- [N: **WARNING**
[N1110] Groups [A61B6/40L](#), [A61B6/40L2](#), [A61B6/40L4](#) and [A61B6/40L6](#) are not complete pending a reorganisation; see [A61B6/03B](#), [A61B6/03B2](#), [A61B6/03B4](#) and [A61B6/03B12](#)
]
- A61B6/40L2 . . . [N: Pencil beams] [N1110]
- A61B6/40L4 . . . [N: Fan-beams] [N1110]
- A61B6/40L6 . . . [N: Cone-beams] [N1110]
- A61B6/40L8 . . . [N: for producing synchrotron radiation] [N1204]
- A61B6/42 . [N: with arrangements for detecting radiation specially adapted for radiation diagnosis (details of radiation detection [G01T1/00](#))] [N1110]
- A61B6/42B . . [N: characterised by using a particular type of detector] [N1110]
- A61B6/42B2 . . . [N: using storage phosphor screens (details of stimuable phosphor sheets [G01T1/29D5](#))] [N1202]
- A61B6/42B4 . . . [N: using image intensifiers] [N1110]
- A61B6/42B6 . . . [N: using matrix detectors (for semiconductor radiation detectors [G01T1/24](#), [G01T1/29D1C](#))] [N1202]

- A61B6/42B8 . . . [N: using energy resolving detectors, e.g. photon counting (detectors for nuclear medicine [G01T1/16](#), [G01T1/29](#))] [N1202]
- A61B6/42B10 . . . [N: using detectors specifically adapted to be used in the interior of the body (detector details for in vivo counting [G01T1/161](#))] [N1202]
- A61B6/42B12 . . . [N: for detecting non x-ray radiation, e.g. gamma radiation (A61B6/03D takes precedence)] [N1204]
- A61B6/42D . . [N: characterised by using a plurality of detector units ([A61B6/40B2](#) takes precedence)] [N1110]
- A61B6/42F . . [N: using a detector unit almost surrounding the patient , e.g. more than 180°] [N1110] [C1207]
- A61B6/42H . . [N: characterised by a detector unit being housed in a cassette] [N1110]
- A61B6/42J . . [N: the detector being combined with a grid or grating] [N1202]

- A61B6/44 . [N: Constructional features of the device for radiation diagnosis] [N1110]
- A61B6/44B . . [N: the device being mobile or portable, e.g. mounted on a trolley or handheld] [N1110] [C1207]
- A61B6/44D . . [N: the device being modular] [N1110]
- A61B6/44F . . [N: related to combined acquisition of different diagnostic modalities] [N1110]
- A61B6/44H . . [N: related to hygiene or sterilisation] [N1110]
- A61B6/44J . . [N: related to the mounting of source units and detector units ([A61B6/02](#) takes precedence)] [N1110]
- A61B6/44J2 . . . [N: the source unit and the detector unit being coupled by a rigid structure] [N1110]
- A61B6/44J2B [N: the rigid structure being a C-arm or U-arm] [N1110] [M1207]
- A61B6/44J2D [N: Tiltable gantries] [N1110]
- A61B6/44J4 . . . [N: the source unit and the detector unit being able to move relative to each other] [N1110]
- A61B6/44J6 . . . [N: the source unit or the detector unit being attached to robotic arms] [N1110]
- A61B6/44J8 . . . [N: the source unit or the detector unit being mounted to ceiling] [N1110]
- A61B6/44J10 . . . [N: the source unit or the detector unit being mounted to counterpoise or springs] [N1110]
- A61B6/44L . . [N: related to servo controlled movement of the source unit] [N1110]
- A61B6/44L2 . . . [N: involving power assist circuits] [N1110]
- A61B6/44P . . [N: Means for cooling ([A61B6/04A10](#) takes precedence)] [N1110]
- A61B6/44R . . [N: Means for identifying the diagnostic device] [N1110]

- A61B6/46 . [N: with special arrangements for interfacing with the operator or the patient] [N1110] [C1207]
- A61B6/46B . . [N: Displaying means of special interest] [N1110]
- A61B6/46B2 . . . [N: characterised by constructional features of the display] [N1110]
- A61B6/46B4 . . . [N: characterised by displaying multiple images or images and diagnostic data on one display] [N1110] [C1202]
- A61B6/46B6 . . . [N: involving a plurality of displays] [N1110]
- A61B6/46B8 . . . [N: adapted to display user selection data, e.g. icons or menus] [N1110]
- A61B6/46B10 . . . [N: adapted to display 3D data (3D image rendering [G06T15/00](#); manipulating 3D models for computer graphics [G06T19](#))] [N1110] [C1207]
- A61B6/46D . . [N: characterised by special input means] [N1110]

- A61B6/46D2 . . . [N: allowing annotation or message recording] [N1110]
- A61B6/46D4 . . . [N: for selecting a region of interest (ROI)] [N1110]

- A61B6/48 . [N: Diagnostic techniques ([A61B6/02B](#), [A61B6/03B](#), [A61B6/03D](#) take precedence)] [N1110] [C1202]
- A61B6/48B . . [N: involving the use of contrast agents] [N1110]
- A61B6/48D . . [N: involving multiple energy imaging] [N1110]
- A61B6/48F . . [N: involving scattered radiation] [N1110]
- A61B6/48H . . [N: involving phase contrast X-ray imaging] [N1110]
- A61B6/48J . . [N: involving fluorescence X-ray imaging] [N1110]
- A61B6/48L . . [N: involving generating temporal series of image data] [N1110]
- A61B6/48L2 . . . [N: involving fluoroscopy] [N1110]
- A61B6/48N . . [N: involving pre-scan acquisition] [N1110]

- A61B6/50 . [N: Clinical applications ([dentistry A61B6/14](#) takes precedence)] [N1110]
- A61B6/50B . . [N: involving diagnosis of head, e.g. neuroimaging, craniography] [N1110]
- A61B6/50D . . [N: involving diagnosis of breast, i.e. mammography] [N1110]
- A61B6/50F . . [N: involving diagnosis of heart] [N1110]

- [N: **WARNING**
[N1110] Group [A61B6/50F](#) is not complete pending a reorganisation; see [A61B6/00D4](#)
]
- A61B6/50H . . [N: involving diagnosis of blood vessels, e.g. by angiography] [N1110]
- A61B6/50J . . [N: involving diagnosis of bone] [N1110]
- A61B6/50L . . [N: involving diagnosis of nerves] [N1110]

- [N: **WARNING**
[N1110] Group [A61B6/50L](#) is not complete pending a reorganisation; see [A61B6/00D](#)
]
- A61B6/50N . . [N: involving determination of haemodynamic parameters, e.g. perfusion CT] [N1110]

- [N: **WARNING**
[N1110] Group [A61B6/50N](#) is not complete pending a reorganisation; see [A61B6/00D](#)
]
- A61B6/50P . . [N: for non-human patients] [N1110]

- A61B6/52 . [N: Devices using data or image processing specially adapted for radiation diagnosis (image processing per se G06T)] [N1110]

- [N: **WARNING**
[N1110] Groups of [A61B6/52](#) are not complete pending a reorganisation; see [A61B6/00](#), [A61B6/00D](#), [A61B6/00F](#), [A61B6/03](#), [A61B6/03B](#) and [A61B6/04](#)
]
- A61B6/52B . . [N: involving processing of raw data to produce diagnostic data] [N1110] [C1207]
- A61B6/52D . . [N: involving processing of medical diagnostic data] [N1110]
- A61B6/52D2 . . . [N: extracting a diagnostic or physiological parameter from medical diagnostic

- data (details of algorithms to analyse biomedical images [G06T7/00B2](#); algorithms for computer assisted diagnosis [G06F19/00M3](#)) [N1110]
- A61B6/52D4 . . . [N: generating planar views from image data, e.g. extracting a coronal view from a 3D image] [N1110]
- A61B6/52D6 . . . [N: combining image data of a patient, e.g. combining a functional image with an anatomical image (details of algorithms for image registration [G06T7/00D1](#))] [N1110]
- A61B6/52D6B [N: combining images from the same or different radiation imaging techniques, e.g. PET and CT] [N1204]
- A61B6/52D6B2 [N: combining overlapping radiation images, e.g. by stitching] [N1204]
- A61B6/52D6D [N: combining images from different diagnostic modalities, e.g. X-ray and ultrasound] [N1204]
- A61B6/52D8 . . . [N: removing objects from field of view, e.g. removing patient table from a CT image] [N1110]
- A61B6/52F . . [N: involving detection or reduction of artifacts or noise (details of algorithms for image enhancement [G06T7/00D](#))] [N1110]
- A61B6/52F2 . . . [N: due to motion] [N1110]
- A61B6/52F2B [N: using data from a motion artifact sensor ([A61B6/52F2D](#) takes precedence)] [N1110]
- A61B6/52F2D [N: involving measuring table sag] [N1110]
- A61B6/52F4 . . . [N: due to scatter] [N1110]
- A61B6/52H . . [N: involving retrospective matching to a physiological signal] [N1110]
- A61B6/52J . . [N: involving using additional data, e.g. patient information, image labeling, acquisition parameters] [N1202] [C1207]
- A61B6/54 . [N: Control of devices for radiation diagnosis] [N1110]
- A61B6/54B . . [N: involving acquisition triggered by a physiological signal] [N1110]
- A61B6/54D . . [N: involving control of exposure] [N1110]
- A61B6/54D2 . . . [N: dependent on patient size] [N1110] [C1207]
- A61B6/54F . . [N: involving automatic set-up of acquisition parameters] [N1110]
- A61B6/54H . . [N: involving tracking of position of the device or parts of the device (using an image of a phantom [A61B6/58D6](#))] [N1110] [C1207]
- A61B6/54J . . [N: Remote control of radiation diagnosis devices] [N1204]
- A61B6/56 . [N: Details of data transmission or power supply, e.g. use of slip rings] [N1110]
- A61B6/56B . . [N: involving image data transmission via a network (transmission or management of patient information [G06F19/00M5](#))] [N1110]
- A61B6/56D . . [N: involving communication between imaging systems] [N1110]
- A61B6/58 . [N: Testing, adjusting or calibrating devices for radiation diagnosis] [N1110]
- A61B6/58B . . [N: Remote testing of the device] [N1110]
- A61B6/58D . . [N: Calibration] [N1110]
- A61B6/58D2 . . . [N: using calibration phantoms (models for medical purposes [G09B23/28](#))] [N1110] [C1207]
- A61B6/58D2B [N: determining position of components of the device using images of the phantom] [N1204]
- A61B6/58D4 . . . [N: Calibration of detector units] [N1110]

- A61B6/58F . . [N: Detection of faults or malfunction of the device] [N1110]
- A61B6/58H . . [N: Alignment of source unit to detector unit] [N1110]
- A61B6/58J . . [N: Setting distance between source unit and detector unit] [N1110] [C1207]
- A61B6/58L . . [N: Setting distance between source unit and patient] [N1110] [C1207]

A61B7/00 Instruments for auscultation

- A61B7/00B . [N: Detecting cranial noise, e.g. caused by aneurism] [N9507]
- A61B7/00D . [N: Detecting lung or respiration noise] [N9507]
- A61B7/00F . [N: Detecting noise caused by implants, e.g. cardiac valves] [N9507]
- A61B7/00H . [N: Detecting skeletal, cartilage or muscle noise ([A61B7/00D](#) and [A61B7/00J](#) take precedence)] [N9507]
- A61B7/00J . [N: Detecting noise of gastric tract, e.g. caused by voiding][N9507]
- A61B7/02 . Stethoscopes [N: (acoustic details thereof [G10K11/00](#))]
- A61B7/02B . . [N: for introduction into the body, e.g. into the oesophagus (oesophageal ECG probes [A61B5/042B](#))]
- A61B7/02D . . [N: comprising more than one sound collector] [N9902]
- A61B7/04 . . Electric stethoscopes (microphones, acoustic transducers therefor [H04R](#))
- A61B7/04B . . . [N: Detection of Korotkoff sounds ([A61B5/0225](#) takes precedence; measuring blood pressure [A61B5/021](#))]

A61B8/00 Diagnosis using ultrasonic, sonic or infrasonic waves (imaging of objects using sonar [G01S15/00](#))

[N: **WARNING**

[N1112] Groups A61B 8/40 - 8/58 do not correspond to former or current IPC groups. Concordance ECLA : IPC groups is as follows: - [A61B8/40](#) - 8/44N : [A61B8/00](#) - [A61B8/44N2](#) : [A61B8/12](#) - [A61B8/44N4](#) - 8/46 : [A61B8/00](#) - [A61B8/48](#) - 8/52 : [A61B8/08](#) - [A61B8/54](#) - 8/58 : [A61B8/00](#)
]

- A61B8/02 . Measuring pulse or heart rate
- A61B8/04 . Measuring blood pressure
- A61B8/06 . Measuring blood flow (measuring volume flow in general [G01E](#), e.g. [G01F1/66](#), [G01F1/72](#); measuring speed of fluids in general [G01P5/00](#))
- A61B8/06B . . [N: to determine blood output from the heart (in general [A61B5/029](#))]
- A61B8/08 . Detecting organic movements or changes, e.g. tumours, cysts, swellings ([A61B8/02](#) to [A61B8/06](#) take precedence)
- A61B8/08D . . [N: for diagnosis of the brain] [C1207]
- A61B8/08D2 . . . [N: using echo-encephalography] [N1111]
- A61B8/08F . . [N: for diagnosis of the breast, e.g. mammography] [C1207]

- A61B8/08H . . [N: involving detecting or locating foreign bodies or organic structures] [C1111]
- A61B8/08H2 . . . [N: for locating instruments] [N1111]
- A61B8/08H4 . . . [N: for locating body or organic structures, e.g. tumours, calculi, blood vessels, nodules] [N1111]
- A61B8/08J . . [N: involving measuring tissue layers, e.g. skin, interfaces] [M1111]
- A61B8/08P . . [N: involving foetal diagnosis; pre-natal or peri-natal diagnosis of the baby] [C1207]
- A61B8/08R . . [N: for diagnosis of bone ([A61B5/45B](#) takes precedence)] [C1207]
- A61B8/08S . . [N: for diagnosis of the heart] [N1111] [C1207]
- A61B8/08T . . [N: for diagnosis of blood vessels] [N1111] [C1207]

- A61B8/10 . Eye inspection

- A61B8/12 . In body cavities or body tracts, e.g. by using catheters (catheters per se [A61M25/00](#)) [C1111]

- A61B8/13 . Tomography ([A61B8/10](#), [A61B8/12](#) take precedence; tomography for radiation diagnosis [A61B6/02](#)) [C1207]
- A61B8/14 . . Echo-tomography
- A61B8/14B . . . [N: characterised by scanning multiple planes] [N1111]
- A61B8/15 . . Transmission-tomography

- A61B8/40 . [N: Positioning of patients, e.g. means for holding or immobilising parts of the patient's body] [N1111] [C1207]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/40B . . [N: using compression means] [N1204]
- A61B8/40D . . [N: using means for diagnosing suspended breasts] [N1204]

- A61B8/42 . [N: Details of probe positioning or probe attachment to the patient] [N1111]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/42B . . [N: by using holders, e.g. positioning frames] [N1111]
- A61B8/42B2 . . . [N: characterised by articulated arms] [N1111]
- A61B8/42B4 . . . [N: characterised by straps, belts, cuffs or braces] [N1111]
- A61B8/42B6 . . . [N: characterised by adhesive patches] [N1111]
- A61B8/42D . . [N: involving determining the position of the probe, e.g. with respect to an external reference frame or to the patient] [N1111]
- [N: using sensors mounted on the probe] [N1111]
- A61B8/42D2 . . . [N: using sensors not mounted on the probe, e.g. mounted on an external reference frame] [N1111]
- A61B8/42F . . [N: involving the acoustic interface between the transducer and the tissue] [N1111]
- A61B8/42F2 . . . [N: characterised by sound-transmitting media or devices for coupling the transducer to the tissue] [N1111]
- A61B8/42F4 . . . [N: characterised by determining or monitoring the contact between the transducer and the tissue] [N1111]

- A61B8/44 . [N: Constructional features of the ultrasonic, sonic or infrasonic diagnostic device] [N1111]
 - [N: **WARNING** [N1111]
 - This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/44B . . [N: Device being mounted on a trolley] [N1111]
- A61B8/44D . . [N: Device being modular] [N1111]
- A61B8/44F . . [N: related to combined acquisition of different diagnostic modalities, e.g. combination of ultrasound and X-ray acquisitions] [N1111]
- A61B8/44H . . [N: related to hygiene or sterilisation] [N1111]
- A61B8/44J . . [N: Device being portable or laptop-like] [N1111]
- A61B8/44L . . [N: involving a docking unit] [N1111]
- A61B8/44M . . [N: Means for identifying the diagnostic device, e.g. barcodes] [N1204]
- A61B8/44N . . [N: related to the probe] [N1111]
- A61B8/44N2 . . . [N: Details of catheter construction] [N1111]
 - [N: **WARNING** [N1111]
 - This subgroup is not complete pending a reorganisation, see [A61B8/12](#)]
- A61B8/44N4 . . . [N: Features of the external shape of the probe, e.g. ergonomic aspects] [N1111]
- A61B8/44N6 . . . [N: Features of the scanning mechanism, e.g. for moving the transducer within the housing of the probe] [N1111] [C1207]
- A61B8/44N6B [N: involving deflection of the probe] [N1204]
- A61B8/44N8 . . . [N: Wireless probes] [N1111]
- A61B8/44P . . [N: using several separate ultrasound transducers or probes] [N1111]
- A61B8/44R . . [N: characterised by features of the ultrasound transducer] [N1111]
- A61B8/44R2 . . . [N: the transducer being a phased array] [N1111]
- A61B8/44R4 . . . [N: characterised by the arrangement of the transducer elements (**devices for short-range imaging using particular transducer elements arrangements under [G01S15/89D1](#); arrangements of transducers in generation of mechanical vibrations of infrasonic, sonic or ultrasonic frequency [B06B1/06C](#)**)] [N1207]
- A61B8/46 . [N: Ultrasonic, sonic or infrasonic diagnostic devices with special arrangements for interfacing with the operator or the patient] [N1111] [C1207]
 - [N: **WARNING** [N1111]
 - This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/46B . . [N: Displaying means of special interest] [N1111]
- A61B8/46B2 . . . [N: characterised by constructional features of the display] [N1111]
- A61B8/46B4 . . . [N: characterised by displaying multiple images or images and diagnostic data on one display (**composite display in devices for short-range imaging with acoustic waves [G01S7/52S8B6](#)**)] [N1111] [C1207]
- A61B8/46B6 . . . [N: involving a plurality of displays] [N1111]
- A61B8/46B8 . . . [N: adapted to display user selection data e.g. icons or menus] [N1111]
- A61B8/46B10 . . . [N: adapted to display 3D data (**3D imaging and stereoscopic displays in**

- devices for short-range imaging with acoustic waves [G01S15/89D9](#) and [G01S7/52S8B3](#), respectively; 3D image rendering [G06T15/00](#); manipulating 3D models for computer graphics [G06T19/00](#)] [N1111] [C1207]
- A61B8/46D . . [N: characterised by special input means] [N1111]
- A61B8/46D2 . . . [N: allowing annotation or message recording] [N1111]
- A61B8/46D4 . . . [N: for selection of a region of interest] [N1111]
- A61B8/48 . [N: Diagnostic techniques ([A61B8/13](#) takes precedence)] [N1111] [C1207]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/08](#)]
- A61B8/48B . . [N: involving the use of contrast agent, e.g. micro-bubbles introduced into the bloodstream (analysis of echo signal exploiting properties of a contrast enhancer in devices for short-range imaging with acoustic waves [G01S7/52S2F1B](#))] [N1111] [C1207]
- A61B8/48D . . [N: involving the acquisition of a 3D volume of data] [N1111]
- A61B8/48F . . [N: involving measuring strain or elastic properties] [N1111] [M1207]
- A61B8/48H . . [N: involving arbitrary m-mode] [N1111]
- A61B8/48J . . [N: involving Doppler signals] [N1204]
- A61B8/52 . [N: Devices using data or image processing specially adapted for diagnosis using ultrasonic, sonic or infrasonic waves (image processing per se [G06T](#))] [N1111]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/08](#) and [A61B8/14](#)]
- A61B8/52B . . [N: involving processing of raw data to produce diagnostic data, e.g. for generating an image (reconstruction [G06T11/00](#))] [N1204]
- A61B8/52D . . [N: involving processing of medical diagnostic data] [N1111]
- A61B8/52D2 . . . [N: for extracting a diagnostic or physiological parameter from medical diagnostic data (for algorithms to analyse biomedical images [G06T7/00B2](#); for algorithms for computer assisted diagnosis [G06F19/00M3](#))] [N1111]
- A61B8/52D4 . . . [N: for generating planar views from image data in a user selectable plane not corresponding to the acquisition plane] [N1111]
- A61B8/52D6 . . . [N: for combining image data of patient, e.g. merging several images from different acquisition modes into one image (for image registration algorithms [G06T7/00D1](#))] [N1111]
- A61B8/52D6B [N: combining images from the same or different imaging techniques, e.g. color Doppler and B-mode] [N1204]
- A61B8/52D6B2 [N: combining overlapping images, e.g. spatial compounding] [N1204]
- A61B8/52D6D [N: combining images from different diagnostic modalities, e.g. ultrasound and X-ray] [N1204]
- A61B8/52F . . [N: involving detection or reduction of artifacts (for image enhancement algorithms [G06T5/00](#))] [N1111]
- A61B8/52F2 . . . [N: due to motion] [N1111]
- A61B8/52H . . [N: involving retrospective matching to a physiological signal] [N1111]
- A61B8/52J . . [N: using additional data, e.g. patient information, image labeling, acquisition parameters] [N1204]
- A61B8/54 . [N: Control of the diagnostic device] [N1111]

- A61B8/54B . . [N: involving acquisition triggered by a physiological signal] [N1111]
- A61B8/54D . . [N: involving monitoring or regulation of device temperature] [N1111]
- A61B8/56 . [N: Details of data transmission or power supply] [N1111]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/56B . . [N: involving data transmission via a network (management of patient information using digital computers [G06F19/00M5](#))] [N1111] [C1207]
- A61B8/58 . [N: Testing, adjusting or calibrating the diagnostic device] [N1111]
- [N: **WARNING** [N1111]
This subgroup is not complete pending a reorganisation, see [A61B8/00](#)]
- A61B8/58B . . [N: Remote testing of the device] [N1111]
- A61B8/58D . . [N: Automatic set-up of the device] [N1111]
- A61B8/58F . . [N: Calibration phantoms (models for medical purposes G09B23/28)] [N1204]

A61B9/00 Instruments for examination by percussion; Pleximeters

- A61B9/00B . [N: Electric apparatus for detecting reflex action, e.g. monitoring depth of anaesthesia (detection of movements [A61B5/11](#))] [C9507]

A61B10/00 Other methods or instruments for diagnosis, e.g. instruments for taking a cell sample, for biopsy, for vaccination diagnosis (vaccination prophylaxis, vaccination therapy [A61B17/20](#)); Sex determination; Ovulation-period determination (menstruation tables [G06C3/00](#)); Throat striking implements

Note

Attention is drawn to group [A61F13/15](#) which provides for swabs

- A61B10/00D . [N: Ovulation-period determination (for animals [A61D17/00H](#))] [C9908]
- A61B10/00E . [N: Vaccination diagnosis other than by injuring the skin, e.g. allergy test patches]
- A61B10/00F . [N: Devices for taking faeces samples; Faecal examination devices (anal receptacles [A61F5/451](#))]
- A61B10/00G . [N: Detection of breast cancer (mammography by transillumination [A61B5/00P2](#), by X-rays [A61B6/00D3](#), by ultrasonic means [A61B8/08E](#))]
- A61B10/00L . [N: Devices for taking samples of body liquids (devices for taking blood samples [A61B5/14B](#))]
- A61B10/00L1 . . [N: for taking amniotic fluid samples]
- A61B10/00L2 . . [N: for taking saliva or sputum samples (devices for receiving spittle [A61J 9/00](#))]
- A61B10/00L4 . . [N: for taking sperm samples (artificial insemination [A61B17/43](#); for animals [A61D19/02B](#); genital receptacles for the male member [A61F5/453](#); massage of the genitals [A61H19/00](#))] [C9709]
- A61B10/00L6 . . [N: for taking sweat or sebum samples (measuring sweat production [A61B5/00E](#))]

- A61B10/00L8 . . [N: for taking urine samples (measuring urological functions [A61B5/20](#); genital receptacles [A61F5/451](#); urinals for bed-ridden persons [A61G9/00U](#))] [C9412]
- A61B10/00S . [N: Casings for storing test samples ([A61B10/00C](#), [A61B10/00F](#) and [A61B10/00L](#) take precedence; preservation of living parts of the human or animal body [A01N1/02](#); containers for retaining a material to be analysed [B01L3/00C](#); test tubes [B01L3/14](#); containers for enzymology or microbiology [C12M1/16](#); swab-sampler being part of enzymology or microbiology container [C12M1/30](#))] [C9412]
- A61B10/02 . [N: Instruments for taking a cell sample or for biopsy ([A61B10/00F](#) and [A61B10/00L](#) take precedence; needle locating or guiding means [A61B17/34D](#); samplers for enzymology or microbiology [C12M1/26](#); sampling or preparing biological specimens [G01N33/483B](#))] [C9807]
- A61B10/02P . . [N: Pointed or sharp biopsy instruments]
- A61B10/02P2 . . . [N: for prostate]
- A61B10/02P4 . . . [N: for taking bone, bone marrow or cartilage samples]
- A61B10/02P6 . . . [N: means for severing sample]
- A61B10/02P6N [N: with sample notch, e.g. on the side of inner stylet] [N0512]
- A61B10/02P8 [N: with vacuum aspiration, e.g. caused by retractable plunger or by connected syringe ([A61B10/02P4](#), [A61B10/02P6](#) take precedence)] [N0512]
- A61B10/02U . . [N: for uterus ([A61B10/00L](#) takes precedence)]
- A61B10/04 . . Endoscopic instruments
- A61B10/06 . . Biopsy forceps [N: e.g. with cup-shaped jaws]

- A61B13/00** **Instruments for depressing the tongue** (combined with illuminating and viewing instruments [A61B1/24](#))

- A61B16/00** **Devices specially adapted for vivisection or autopsy** (similar devices for medical purposes, see the relevant groups for such devices; [N: autopsy tables [A61G13/00D](#)])

- Guide heading:** **Surgery**

- A61B17/00** **Surgical instruments, devices or methods, e.g. tourniquets** ([A61B18/00](#) takes precedence; contraceptive devices, pessaries, or applicators therefor [A61F6/00](#); eye surgery [A61F9/007](#); ear surgery [A61F11/00](#)) [C9702]
- A61B17/00B . [N: Vein tendon strippers (tube strippers [A61M1/00R](#))]
- A61B17/00E . [N: for minimally invasive surgery ([A61B17/02E](#), [A61B17/04E](#), [A61B17/12L2](#), [A61B17/128E](#), [A61B17/28E](#), [A61B17/32E](#) take precedence)]
- A61B17/00L . [N: Surgical glue applicators (surgical adhesives [A61L24/00](#); two-component delivery syringes [A61M5/19](#))] [C9410]
- A61B17/00P . [N: Implements for plugging an opening in the wall of a hollow or tubular organ, e.g. for sealing a vessel puncture or closing a cardiac septal defect (sutures [A61B17/04](#); closing rectum or urethra near body surface [A61F2/00B2](#))]
- A61B17/02 . for holding wounds open; Tractors ([N: specula [A61B1/32](#)]; drainage appliances for wounds [A61M27/00](#))

- A61B17/02A . . [N: with antagonistic arms as supports for retractor elements]
- A61B17/02E . . [N: for minimally invasive surgery ([A61B17/02E](#), [A61B17/02L](#), [A61B17/04E](#), [A61B17/12L2](#), [A61B17/128E](#), [A61B17/28E](#), [A61B17/32E](#) take precedence)]
- A61B17/02F . . [N: for eye surgery]
- A61B17/02J . . [N: Joint distractors]
- A61B17/02L . . [N: Abdominal wall lifters] [N9607]
- A61B17/02R . . [N: with ring member to support retractor elements]

- A61B17/04 . for suturing wounds; Holders or packages for needles or suture materials ([suture materials A61L17/00](#))
- A61B17/04A . . [N: Suture anchors, buttons or pledgets, i.e. means for attaching sutures to bone, cartilage or soft tissue; Instruments for applying or removing suture anchors ([A61B17/064B](#) takes precedence; fixation devices for tendons or ligaments [A61F2/08B6](#))] [C9603]
- A61B17/04B . . [N: Suture bridges]
- A61B17/04C . . [N: Instruments for cutting sutures ([surgical cutting instruments A61B17/32](#))]
- A61B17/04E . . [N: Suturing instruments for use in minimally invasive surgery, e.g. endoscopic surgery]
- A61B17/04G . . [N: Needle or suture guides ([guides for drills, pins or wire A61B17/17](#); for [puncturing needles A61B17/34D](#))] [C9807]
- A61B17/04H . . [N: Hand-held instruments for holding sutures ([A61B17/04E](#) takes precedence; other holders for needles or sutures [A61B17/06H](#); surgical forceps [A61B17/28](#); surgical pincettes [A61B17/30](#))] [C1008]
- A61B17/04J . . [N: Devices or means, e.g. loops, for capturing the suture thread and threading it through an opening of a suturing instrument or needle eyelet] [N9709]
- A61B17/04K . . [N: Suture clamps, clips or locks, e.g. for replacing suture knots; Instruments for applying or removing suture clamps, clips or locks ([suture anchors A61B17/04A](#); [wound clamps or clips A61B17/08](#); [ligaturing clamps or clips A61B17/122](#))] [N9603]
- A61B17/04M . . [N: Sewing machines for surgery] [N9410]
- A61B17/04P . . [N: Protective devices for suturing, i.e. for protecting the patient's organs or the operator]
- A61B17/06 . . Needles; [N: Sutures; Needle-suture combinations]; Holders or packages for needles or suture materials ([puncturing needles A61B17/34](#); [nerve needles A61C5/02](#); [hypodermic needles A61M5/32](#); [N: sewing needles [D05B85/00](#)])
- A61B17/06A . . . [N: Means for attaching suture to needle ([tipping A61B17/06T](#); [connecting wire to other metallic objects B21F15/00](#))] [C9709]
- A61B17/06H . . . [N: Holders for needles or sutures, e.g. racks, stands ([hand-held holding instruments A61B17/04H](#); [holders for articles A61B19/02H](#); racks for syringes or for hypodermic or infusion needles [A61M5/00S](#))] [C9603]
- A61B17/06N . . . [N: Needles, e.g. needle tip configurations ([making needles B21G1/00](#))]
- A61B17/06N12 [N: Big needles, either gripped by hand or connectable to a handle] [N1008]
- A61B17/06P [N: Packages or dispensers for needles or sutures ([packages for sharps A61B19/02P2](#); for dental floss [A61C15/04C](#); packages for needles in general [B65D85/24](#))] [C9412]
- A61B17/06P2 [N: of cylindrical shape]
- A61B17/06P2F [N: Flat cylinders, e.g. including an inner reel]
- A61B17/06P2T [N: Elongate cylinders, i.e. tubes]
- A61B17/06P4 [N: of parallelepipedal shape, e.g. made of rectangular or slightly oval panels]

- A61B17/06P4F [N: including a retainer comprising three or more foldable panels]
- A61B17/06R [N: Devices for removing or collecting used needles or sutures ([A61B17/04C](#) takes precedence; for sharps [A61B19/02R2](#))]
- A61B17/06S [N: Sutures (suture materials [A61L17/00](#); manufacture of artificial threads [D01D](#); treatment of threads [D06M](#))]
- A61B17/06T [N: Apparatus or means for preparing the cut end of the suture thread to be attached to the needle, e.g. tipping to prevent brooming ([A61B17/06A](#) takes precedence)] [N9709]
- A61B17/06Z Needle manipulators[N0405]
- A61B17/062N [N: the needle being specially adapted to interact with the manipulator, e.g. being ridged to snap fit in a hole of the manipulator ([A61B17/06N12](#) takes precedence)] [N1008]

- A61B17/064 Surgical staples, [N: i.e. penetrating the tissue]
- A61B17/064B [N: for bones, e.g. for osteosynthesis or connecting tendon to bone]
- A61B17/064C [N: with separate closing member, e.g. for interlocking with staple]
- A61B17/064D [N: penetrating the tissue, deformable to closed position]

- A61B17/068 Surgical staplers, [N: e.g. containing multiple staples or clamps([staplers containing only one stapleA61B17/10](#); [magazines or containers for staplesA61B17/10P](#); for performing anastomosis[A61B17/115](#);[N: staplers in generalB25C5/00](#))]
- A61B17/068B [N: for applying U-shaped staples or clamps, e.g. without a forming anvil]
- A61B17/068B2 [N: having a forming anvil staying above the tissue during stapling]
- A61B17/068B4 [N: having a forming anvil staying below the tissue during stapling]
- A61B17/072 for applying a row of staples in a single action, [e.g. the staples being applied simultaneously]
- A61B17/072B [N: the staples being applied sequentially]
- A61B17/072R Reinforcements for staple line, e.g. pledgets [N1204]

- A61B17/076 for removing surgical staples [N: or wound clamps]

- A61B17/08 Wound clamps [N: or clips, i.e. not or only partly penetrating the tissue ([suture bridges A61B17/04B](#)); Devices for bringing together the edges of a wound] [C9412]
- A61B17/08C [N: Clips, e.g. resilient]
- A61B17/08L [N: with adhesive layer]

- A61B17/10 for applying or removing wound clamps, [N: e.g. containing only one clamp or staple ([A61B17/076](#) takes precedence; [containing multiple wound clamps A61B17/068](#))]; Wound clamp magazines (containers, packaging elements or packages specially adapted for particular articles or with special means for dispensing contents [B65D83/00](#), [B65D85/00](#))
- A61B17/10P [N: Wound clamp magazines ([for packaging sharps A61B19/02P2](#))]

- A61B17/11 for performing anastomosis; Buttons for anastomosis
- A61B17/11D [N: of the digestive tract, e.g. bowels or oesophagus] [N9611]
- A61B17/11N [N: of nerves]
- A61B17/11T [N: of tendons]
- A61B17/115 Staplers [N: for performing anastomosis in a single operation]
- A61B17/115B [N: applying the staples on the outside of the lumen]

- A61B17/115C . . . Circular staplers comprising a plurality of staples [N1204]
- A61B17/12 . . . for ligaturing or otherwise compressing tubular parts of the body, e.g. blood vessels, umbilical cord (specially adapted for vas deferens or fallopian tubes [A61F6/20](#); materials for ligaturing blood vessels [A61L17/00](#))
- A61B17/12L . . . [N: Implements for ligaturing other than by clamps or clips, e.g. using a loop with a slip knot]
- A61B17/12L2 . . . [N: for use in minimally invasive surgery, e.g. endoscopic surgery]
- A61B17/12P . . . [N: Occluding by internal devices, e.g. balloons or releasable wires (plugging an opening in the wall of an organ [A61B17/00P](#); occluders for the cervical canal [A61F6/14C](#); vas deferens occluders [A61F6/20](#))] [C9705]
- A61B17/12P1 . . . [N: Type of occlusion (A61B17/12P5B1 takes precedence)] [N1204]
- A61B17/12P1C [N: complete occlusion] [N1204]
- A61B17/12P1P [N: partial occlusion] [N1204]
- A61B17/12P1T [N: temporary occlusion] [N1204]
- A61B17/12P1T2 [N: double occlusion, e.g. during anastomosis] [N1204]
- A61B17/12P5 [N: characterised by the location of the occluder] [N1204]
- A61B17/12P5A [N: in an air passage] [N1204]
- A61B17/12P5B [N: in a blood vessel] [N1204]
- A61B17/12P5B1 [N: within an aneurysm] [N1204]
- A61B17/12P5B1S [N: for positioning in conjunction with a stent] [N1204]
- A61B17/12P5H [N: within the heart (for closing a cardiac septal defect [A61B17/00P](#))] [N1204]
- A61B17/12P7 [N: characterised by the type of occluding device] [N1204]
- A61B17/12P7B [N: Balloons] [N1204]
- A61B17/12P7C [N: Coils or wires] [N1204]
- A61B17/12P7C1 [N: having a pre-set deployed three-dimensional shape (methods of manufacturing [K61B17/00M](#))] [N1204]
- A61B17/12P7C3 [N: comprising additional materials, e.g. thrombogenic, having filaments, having fibers, being coated] [N1204]
- A61B17/12P7C5 [N: having stretch limiting means] [N1204]
- A61B17/12P7P [N: Solid plugs; being solid before insertion] [N1204]
- A61B17/12P7S [N: having a string of elements connected to each other] [N1204]
- A61B17/12P7W [N: having a mesh structure ([A61B17/12P7C](#) takes precedence)] [N1204]
- A61B17/12P7W1 [N: having a pre-set deployed three-dimensional shape (methods of manufacturing [K61B17/00M](#))] [N1204]
- A61B17/12P7W3 [N: comprising additional materials, e.g. thrombogenic, having filaments, having fibers or being coated] [N1204]
- A61B17/12P7Z [N: formed by fluidized, gelatinous or cellular remodelable materials, e.g. embolic liquids, foams or extracellular matrices] [N1204]
- A61B17/12P7Z1 [N: liquid materials adapted to be injected] [N1204]
- A61B17/12P7Z3 [N: expandable in contact with liquids] [N1204]
- A61B17/12P7Z5 [N: comprising a curable material] [N1204]
- A61B17/122 . . . Clamps or clips, [N: e.g. for the umbilical cord (for the vas deferens [A61F6/20C](#))]
- A61B17/122C [N: Packages or dispensers therefor (clip magazines incorporated in a clip-applying instrument [A61B17/128](#); for surgical articles [A61B19/02P](#))]

- A61B17/122S . . . [N: Spring clips] [N9509]
- A61B17/128 . . for applying or removing clamps or clips
- A61B17/128E . . . [N: for minimally invasive surgery]
- A61B17/132 . . Tourniquets [N: ([sphygmometers A61B5/02](#))]
- A61B17/132G . . . [N: comprising a flexible encircling member ([A61B17/135 takes precedence](#))]
- A61B17/132G2 [N: with means for applying local pressure ([pressure pads A61F5/30](#))]
- A61B17/132G4 [N: Tensioning clamps]
- A61B17/135 . . . inflatable (for measuring blood pressure [A61B5/022](#); inflatable pressure pads [A61F5/34](#))
- A61B17/135B [N: Automated control means therefor]

- A61B17/14 . Surgical saws ([N: [A61B17/16H](#) takes precedence]; tooth saws [A61C3/12](#); [N: saws for jaw bone [A61C8/00T](#)]; cast-cutting saws [A61F15/02](#); [N: Accessories therefor] [C9609]

- [N: **WARNING** [N0807]
New subgroups of [A61B17/14](#) are not complete, pending a reorganisation. See provisionally also group [A61B17/14](#)]
- A61B17/14B . . [N: Saw blades] [N1204]
- A61B17/14R . . [N: reciprocating] [N1204]
- A61B17/15 . . Guides therefor [N: ([arrangements for guiding straight saw blades in general B23D51/02G](#))] [N9509]
- A61B17/15C . . . [N: for corrective osteotomy] [N0806]
- A61B17/15C2 [N: for removing a wedge-shaped piece of bone] [N0806]
- A61B17/15K . . . [N: for preparing bone for knee prosthesis] [N9606]
- A61B17/15K2 [N: Cutting femur] [N9606]
- A61B17/15K4 [N: Cutting tibia] [N9606]
- A61B17/15K6 [N: Cutting patella] [N9606]

- A61B17/16 . [N: Bone cutting, breaking or removal means other than saws, e.g.] Osteoclasts; Drills or chisels for bones; Trepanns [N: ([arthroscopic bone cutters A61B17/32E](#); [dental implant drills potentially for other surgical use A61C8/00T](#); [bone grinders A61F2/46G, A22C17/06](#); [A61B17/16S](#) takes precedence over all other subgroups except [A61B17/17](#))] [C0305]

- [N: **WARNING** [N0807]
New groups [A61B17/16S10](#), [A61B17/16S12](#), [A61B17/16S14](#), [A61B17/16S16](#), [A61B17/16S18](#), [A61B17/16S20](#) and [A61B17/16S22](#) are not complete, pending a reorganisation. See provisionally also group [A61B17/16](#) and subgroups]
- A61B17/16C . . [N: Chisels; Rongeurs; Punches; Stamps] [C9702]
- A61B17/16C2 . . . [N: of forceps type, i.e. having two jaw elements moving relative to each other] [N1204]
- A61B17/16C2E [N: the two jaw elements being linked to two elongated shaft elements moving longitudinally relative to each other] [N1204]
- A61B17/16C2E2 [N: the two jaw elements being integral with respective elongate shaft elements] [N1204]
- A61B17/16D . . [N: Component parts (not used, see subgroups)] [N0209]

- A61B17/16D2 . . . [N: Drill bits, i.e. rotating tools extending from a handpiece to contact the worked material] [N0209] [C1207]
 - A61B17/16D2B [N: with mobile or detachable parts] [N0209]
 - A61B17/16D4 . . . [N: Chucks or tool parts which are to be held in a chuck] [N0209]
 - A61B17/16D6 . . . [N: Drill handpieces ([A61B17/16D8](#), [A61B17/16D10](#) take precedence)] [N0209]
 - A61B17/16D6B [N: Drive mechanisms therefor] [N0209] [C1205]
 - A61B17/16D8 . . . [N: Control means; Display units] [N0209]
 - A61B17/16D10 . . . [N: Motors; Power supplies] [N0209]
 - A61B17/16D12 . . . [N: Special drive shafts, e.g. flexible shafts ([A61B17/16K](#), [A61B17/16J](#) take precedence)] [N0209]
 - A61B17/16D14 . . . [N: Sleeves i.e. non-rotating parts surrounding the bit shaft, e.g. the sleeve forming a single unit with the bit shaft ([A61B17/16L](#) takes precedence)] [N0209]
 - A61B17/16G . . [N: for grafts, harvesting or transplants] [C0209]
 - A61B17/16H . . [N: Hollow drills or saws producing a curved cut, e.g. cylindrical ([A61B10/02P4](#), [A61B17/16T](#) take precedence)] [N9609]
 - A61B17/16J . . [N: intramedullary] [N0106]
 - A61B17/16K . . [N: for producing a curved bore] [N0209]
 - A61B17/16L . . [N: using fluid other than turbine drive fluid] [N0209]
 - A61B17/16L2 . . . [N: with sealing means] [N0209]
 - A61B17/16N . . [N: for tapping] [N0209]
 - A61B17/16Q . . [N: Bone breaking devices] [N0209] [C0904]
 - A61B17/16R . . [N: Surgical rasps, files, planes, or scrapers] [C1205]
 - A61B17/16S . . [N: for particular parts of the body] [N0106] [C0209]
- [N: **WARNING**[C0807]
Subgroups [A61B17/16S10](#), [A61B17/16S12](#), [A61B17/16S14](#), [A61B17/16S16](#),
[A61B17/16S18](#), [A61B17/16S20](#) and [A61B17/16S22](#) are not complete pending a
reorganisation. See also [A61B17/16](#) and subgroups thereof especially
[A61B17/16S](#)
]
- A61B17/16S2 . . . [N: for the hip] [N0209]
 - A61B17/16S2C [N: for the acetabulum] [N0209]
 - A61B17/16S2F [N: for the upper femur ([A61B17/16J](#) takes precedence)] [N0209]
 - A61B17/16S4 . . . [N: for the spine] [N0209]
 - A61B17/16S6 . . . [N: for the jaw] [N0209]
 - A61B17/16S8 . . . [N: for the knee] [N0209]
 - A61B17/16S8P [N: for the patella] [N0209]
 - A61B17/16S10 . . . [N: for the ear] [N0807]
 - A61B17/16S12 . . . [N: for the foot or ankle] [N0807]
 - A61B17/16S14 . . . [N: for the shoulder] [N0807]
 - A61B17/16S16 . . . [N: for the hand or wrist] [N0807]
 - A61B17/16S18 . . . [N: for the sinus or nose] [N0807]
 - A61B17/16S20 . . . [N: for the sternum] [N0807]
 - A61B17/16S22 . . . [N: for the ribs] [N0807]
 - A61B17/16T . . [N: Trepan or craniotomes, i.e. specially adapted for drilling thin bones such as the skull] [C0209]

- A61B17/16W . . . [N: specially adapted for wire insertion] [N0209]
- A61B17/17 . . . Guides [N: or aligning means] for drills, [N: mills, pins or wires] [N9509]
- A61B17/17B [N: using imaging means, e.g. by X-rays] [N9509]
- A61B17/17D [N: using electromagnetic effects, e.g. with magnet and external sensors] [N9602]
- A61B17/17E [N: for external fixation] [N9901]
- A61B17/17F [N: for applying tendons or ligaments (implements for applying tendons or ligaments [A61F2/08B4](#))] [N9509]
- A61B17/17J [N: for applying intramedullary nails or pins] [N0209] [C1205]
- A61B17/17K [N: for applying pins along or parallel to the axis of the femoral neck] [N1204]
- A61B17/17M [N: for applying transverse screws or pins through intramedullary nails or pins] [N1204]
- A61B17/17P [N: for holes for bone plates or plate screws] [N9901]
- A61B17/17Q [N: for bone breaking devices] [N0209] [C1205]
- A61B17/17R [N: for rasps or chisels] [N9901] [C1205]
- A61B17/17S [N: specially designed for particular parts of the body ([A61B17/17B](#) takes precedence)] [N9901] [C0305]
- A61B17/17S2 [N: for the hip] [N9901]
- A61B17/17S2C [N: for the acetabulum] [N9901]
- A61B17/17S2F [N: for preparing the femur for hip prosthesis insertion] [N9901]
- A61B17/17S2P [N: for fixing pins through femoral hip prostheses] [N9901] [C0904]
- A61B17/17S4 [N: for the spine] [N9901]
- A61B17/17S6 [N: for the jaw (guiding dental drills [A61C1/08F](#))] [N9901] [C0004]
- A61B17/17S8 [N: for the knee] [N9901]
- A61B17/17S8P [N: for the patella] [N9901]
- A61B17/17V [N: for holes for sutures or flexible wires] [N1204]

- A61B17/20 . . . for vaccinating or cleaning the skin previous to the vaccination (diagnosis by vaccination [N: other than by injuring the skin [A61B10/00E](#)]; apparatus for injections [A61M](#))
 [N: **Note**
 Cleaning the skin previous to the vaccination is classified in [A61B19/00K](#)
]
- A61B17/20B . . . [N: Vaccinating by means of needles or other puncturing devices]

- A61B17/22 . . . Implements for squeezing-off ulcers or the like on [N: the inside of] inner organs of the body; Implements for scraping-out cavities of body organs, e.g. bones; Calculus removers; Calculus smashing apparatus; [N: Apparatus for removing obstructions in blood vessels, not otherwise provided for ([dilators](#) [A61M29/00](#))]
- A61B17/22B . . . [N: using mechanical vibrations, e.g. ultrasonic shock waves ([A61B17/225](#) takes precedence)] [C0906]
- A61B17/22B2 [N: in direct contact with, or very close to, the obstruction or concrement (for removing obstructions in blood vessels by laser [A61B18/24B](#))] [C0411]
- A61B17/22B2D [N: the ultrasound transducer being inside patient's body at the distal end of the catheter] [N9807]
- A61B17/22B2E [N: using electric discharge]
- A61B17/22B14 [N: Means for measuring shock waves]

- A61B17/22E . . [N: Gripping instruments, e.g. forceps, for removing or smashing calculi ([A61B17/221](#) takes precedence)] [C0906]
- A61B17/22E2 . . . [N: having inflatable gripping elements ([balloon catheters A61M25/10](#))]
- A61B17/221 . . Gripping devices in the form of loops or baskets [N: for gripping calculi or similar types of obstructions ([surgical snare instruments A61B17/32B](#))] [N0906]
- A61B17/225 . . for extracorporeal shock wave lithotripsy (ESWL), e.g. by using ultrasonic waves [N0906]
- A61B17/225C . . . [N: characterised by coupling elements between the apparatus, e.g. shock wave apparatus or locating means, and the patient, e.g. details of bags, pressure control of bag on patient] [N0906]
- A61B17/225M . . . [N: Means for positioning patient, shock wave apparatus or locating means, e.g. mechanical aspects, patient beds, support arms, aiming means ([positioning of patients for radiation diagnosis A61B6/04](#); [positioning of locating means inside shock wave apparatus A61B17/225P](#))] [N0906]
- A61B17/225P . . . [N: with means for locating or checking the concrement, e.g. X-ray apparatus, imaging means ([A61B17/225M](#) takes precedence)] [N0906]
- A61B17/225P2 [N: integrated in a central portion of the shock wave apparatus] [N0906]
- A61B17/24 . . for use in the oral cavity, larynx, bronchial passages or nose ([for medical inspection of cavities or tubes in the body A61B1/00](#)); Tongue scrapers
- A61B17/24C . . [N: for cleaning of the tongue] [N9810]
- A61B17/26 . . Tonsillotomes, with or without means for stopping bleeding
- A61B17/28 . . Surgical forceps ([N: for holding suture needles or materials [A61B17/04H](#); for removing or smashing calculi [A61B17/221](#); surgical scissors [A61B17/3201](#); obstetrical forceps [A61B17/44](#); for inserting intraocular lenses [A61F2/16C](#); hand-held gripping tools in general [B25B7/00](#))] [C0906]
- A61B17/28B . . [N: with two or more pivotal connections ([A61B17/29](#) takes precedence)] [C0906]
- A61B17/28D . . [N: with a single pivotal connection ([A61B17/29](#) takes precedence)] [C0906]
- A61B17/28D2 . . . [N: Pivots]
- A61B17/28D4 . . . [N: Jaws]
- A61B17/28D6 . . . [N: Locking means]
- A61B17/28D8 . . . [N: Handles]
- A61B17/285 . . combined with cutting implements [N0906]
- A61B17/29 . . Forceps for use in minimally invasive surgery [N0906]
- A61B17/29H . . . [N: Handles] [N0906]
- A61B17/295 . . . combined with cutting implements [N0906]
- A61B17/295B [N: for cutting or punching bone or cartilage, e.g. rongeurs ([A61B17/32E2](#) takes precedence; forceps for biopsy [A61B10/06](#); non-endoscopic rongeurs [A61B16/16C](#))] [N0906]
- A61B17/30 . . Surgical pincettes [N: without pivotal connections] ([N: for holding suture needles or materials [A61B17/04H](#)]; wound clamps [A61B17/08](#); [N: hand-held gripping tools without pivotal connections in general [B25B9/02](#)])
- A61B17/32 . . Surgical cutting instruments [N: ([A61B18/04B](#) takes precedence; suture cutters [A61B17/04C](#); instruments for ligaturing or cutting [A61B17/128](#); instruments for rupturing the amniotic membrane [a61B17/42B](#); specially adapted knives for eye surgery [A61F9/013K](#))] [C0607]

- A61B17/32E . . . [N: Endoscopic cutting instruments e.g. arthroscopes, resectoscopes ([A61B10/02P](#), [A61B17/29](#), [A61B17/3207](#) take precedence)] [C0909]
- A61B17/32E2 . . . [N: with continuously rotating, oscillating or reciprocating cutting instruments] [C9505]
- A61B17/32E4 . . . [N: adapted for use within the carpal tunnel]
- A61B17/32U . . . [N: using mechanical vibrations, e.g. ultrasonic ([A61B17/22B2](#), [A61C3/03](#) and [A61F9/007R2](#) take precedence)]
- A61B17/32U8 . . . [N: with additional movable means for clamping or cutting tissue, e.g. with a pivoting jaw] [N0101]
- A61B17/3201 . . . Scissors (for biopsy [A61B10/02](#)) [N0906]
- A61B17/3203 . . . Fluid jet cutting instruments [N0906]
- A61B17/3203R . . . [N: for removing obstructions from inner organs or blood vessels, e.g. for atherectomy] [N0906]
- A61B17/3205 . . . Excision instruments [N0906]
- A61B17/3205G . . . [N: Punch like cutting instruments, e.g. using a cylindrical or oval knife ([A61B17/326](#) takes precedence; trepans [A61B17/16T](#); for use on the cornea [A61F9/007](#))] [N0906]
- A61B17/3205S . . . [N: Surgical snare instruments (for removing or smashing calculi [A61B17/221W](#); tonsillotomes [A61B17/26](#))] [N0906]
- A61B17/3207 . . . Atherectomy devices [N: working by cutting or abrading; Similar devices specially adapted for non-vascular obstructions ([A61B17/3203R](#) takes precedence; endoscopic cutting instruments [A61B17/32E](#))] [N0906]
- A61B17/3207C . . . [N: Curettes, e.g. hollow scraping instruments] [N0906]
- A61B17/3207E . . . [N: with radially expandable cutting or abrading elements ([A61B17/3207P](#) takes precedence)] [N0906]
- A61B17/3207P . . . [N: Pullback cutting; combined forward and pullback cutting, e.g. with cutters at both sides of the plaque] [N0906]
- A61B17/3207R . . . [N: with a rotating cutting instrument, e.g. motor driven ([A61B17/3207E](#), [A61B17/3207P](#) and [A61B17/3207S](#) take precedence; for removing intra-ocular material [A61F9/007R6](#); endoscopic rotatable cutting instruments [A61B17/32E2](#))] [N0906]
- A61B17/3207S . . . [N: through side-hole, e.g. sliding or rotating cutter inside catheter] [N0906]
- A61B17/3209 . . . Incision instruments [N0906]
- A61B17/3209F . . . [N: for skin incisions] [N0906]
- A61B17/3211 . . . Surgical scalpels, knives; Accessories therefor [N0906]
- A61B17/3213 . . . with detachable blade [N0906]
- A61B17/3215 . . . Packages or dispensers for scalpel blades [N: (for sharps [A61B19/02P2](#))] [N0906]
- A61B17/3217 . . . Devices for removing or collecting used scalpel blades [N: (for sharps [A61B19/02R2](#))] [N0906]
- A61B17/322 . . . Skin grafting apparatus
- A61B17/326 . . . Circumcision apparatus
- A61B17/34 . . . Trocars; Puncturing needles [N: (pointed biopsy instruments [A61B10/00C2](#); devices for piercing the ear-lobes [A44C7/00B](#); seals or hemostasis valves [A61M39/06](#))]
- A61B17/34B . . . [N: Puncturing needles for the peridural or subarachnoid space or the plexus, e.g. for anaesthesia (local anaesthesia [A61M19/00](#))] [C9812]
- A61B17/34D . . . [N: Needle locating or guiding means (guides for suture needles [A61B17/04G](#); guiding or tracking by nuclear magnetic resonance [G01R33/28H](#))] [C9805]

- A61B17/34E . . [N: for introducing tubes or catheters, e.g. gastrostomy tubes, drain catheters ([A61B17/34G](#) takes precedence; body piercing catheter guide needles [A61M25/06](#))]
- A61B17/34G . . [N: Details of tips or shafts, e.g. grooves, expandable, bendable; Multiple coaxial sliding cannulas, e.g. for dilating ([syringe needles A61M5/32](#); dilators [A61M29/00](#))]
- A61B17/34G4 . . . [N: Cannulas] [N9908]
- A61B17/34G4A [N: Access ports, e.g. toroid shape introducers for instruments or hands ([access sites for liquids A61M1/00S](#))] [N9908]
- A61B17/34G4C [N: being collapsible, e.g. made of thin flexible material ([A61B17/34G4A](#) takes precedence)] [N9908]
- A61B17/34G4H [N: with means for changing the inner diameter of the cannula, e.g. expandable ([A61B17/34G4A](#), [A61B17/34G4C](#) take precedence; catheters [A61M25/06H](#))] [N9908]
- A61B17/34H . . [N: with means for changing the diameter or the orientation of the entrance port of the cannula, e.g. for use with different-sized instruments, reduction ports, adapter seals ([expandable cannulas A61B17/34G](#))] [N9410][C9412]
- A61B17/34J . . [N: for implanting or removing devices, e.g. prostheses, implants, seeds, wires ([devices for implanting seeds A61M37/04](#))]
- A61B17/34L . . [N: for bones, e.g. intraosseus injections]
- A61B17/34N . . [N: Insufflating needles, e.g. Veress needles] [N0608]
- A61B17/34P . . [N: Powered trocars, e.g. electrosurgical cutting, lasers, powered knives] [N9410]
- A61B17/34Q . . [N: Endoscopic needles, e.g. for infusion (biopsy needles [A61B10/02P](#); catheters with injection needles [A61M25/00T](#))] [N9906] [C0706]
- A61B17/34S . . [N: with safety means for protection against accidental cutting or pricking, e.g. limiting insertion depth, pressure sensors ([for the peridural space A61B17/34B](#))] [N9410]
- A61B17/34S2 . . . [N: Protecting sleeves or inner probes; Retractable tips ([for protecting body piercing guide needles A61M25/06E3](#))] [N9410]
- A61B17/34V . . [N: Valves therefor, e.g. flapper valves, slide valves ([haemostasis valves A61M39/06](#); [check valves A61M39/24](#))] [N9502]
- A61B17/42 . . Gynaecological or obstetrical instruments or methods ([N: ligaturing clamps or clips for the umbilical cord [A61B17/122](#); curettage [A61B17/3207](#); dilators [A61M29/00](#)] [C0906]
- A61B17/42B . . [N: Instruments for rupturing the amniotic membrane]
- A61B17/42M . . [N: Instruments for manoeuvring or retracting the uterus, e.g. during laparoscopic surgery] [N9507]
- A61B17/425 . . for reproduction or fertilisation ([specially adapted for use with animals A61D19/00](#)) [N: (not used, see subgroups)]
- A61B17/43 . . . for artificial insemination
- A61B17/435 . . . for embryo [N: or ova] transplantation
- A61B17/44 . . Obstetrical forceps
- A61B17/44B . . . [N: without pivotal connections, e.g. using vacuum] [N9410]
- A61B17/46 . . Embryotomes ([for animals A61D1/10](#))
- A61B17/48 . . Bags for midwives
- A61B17/50 . . Instruments, other than pincettes or toothpicks, for removing foreign bodies from the human body ([locating otherwise A61B5/06](#); [locating by radiation A61B6/00](#); [N: removing calculi [A61B17/22](#); from the eyes [A61F9/007F](#))] [C9807]
- A61B17/52 . . Magnets

- A61B17/54 Chiroprodists` instruments, [N: e.g. pedicure (**chiropractic devices** [A61H1/00P](#))]
- A61B17/54P [N: using a stream or spray of abrasive particles] [N9702]

- A61B17/56 Surgical instruments or methods for treatment of bones or joints; Devices specially adapted therefor [N: (**orthopaedic methods or devices for non-surgical treatment of bones or joints** [A61F5/00](#))] [C0909]
- [N: **Notes**[N0909]
- 1. Documents concerning exclusively surgical methods are classified only in this group.
- 2. Surgical instruments or devices are classified only in the relevant subgroups]

- A61B17/56J [N: Implants for placement in joint gaps without restricting joint motion, e.g. to reduce arthritic pain] [N0506] [C0909]
- A61B17/58 for osteosynthesis, e.g. bone plates, screws, [N: setting implements] or the like ([A61B17/14](#), [A61B17/16](#) take precedence; [N: splints [A61B5/01](#); traction bandages [A61B13/10](#)]) [C9509]
- A61B17/60 for external osteosynthesis, e.g. distractors, contractors [C0106]
- A61B17/62 Ring frames, i.e. devices extending around the bones to be positioned ([N: [A61B17/64F](#), [A61B17/66](#) take precedence) [N9509]
- A61B17/64 Devices extending alongside the bones to be positioned [N: not used, see subgroups and [A61B17/60](#)] [N9509] [C1109]
- A61B17/64B [N: Devices not permitting mobility, e.g. fixed to bed, with or without means for traction or reduction (**without surgery** [A61F5/04](#))] [N9509]
- A61B17/64C [N: with non-continuous, e.g. hinged, pin-clamp connecting element ([A61B17/64D](#), [A61B17/64G](#) take precedence)] [N9807]
- A61B17/64D [N: specially adapted to be fitted across a bone joint] [N9509] [C9807]
- A61B17/64F [N: specially adapted for use on body parts other than limbs, e.g. trunk or head] [N9509] [C1205]
- A61B17/64G [N: Bilateral fixators, i.e. with both ends of pins or wires clamped] [N9509] [C1205]
- A61B17/64H [N: comprising a framework ([A61B17/64D](#), [A61B17/64G](#) take precedence)] [N9807]
- A61B17/64K [N: with pin-clamps fixed at ends of connecting element] [N9807]
- A61B17/64M [N: with pin-clamps movable along a solid connecting rod] [N9807]
- A61B17/64M2 [N: the connecting rod being threaded] [N9807]
- A61B17/64M4 [N: the connecting rod having a non-circular section] [N9807]
- A61B17/64P [N: allowing small-scale motion of bone ends] [N9807]
- A61B17/66 [N: Alignment], compression or distraction mechanisms [N9702] [C9807]
- A61B17/66J [N: for jaw bones, e.g. subcutaneous distractors with external access (**periodontal bone regeneration** [A61C8/00C1A](#))] [N0007] [C0106]
- A61B17/66J2 [N: for alveolar distraction][N0401]
- A61B17/68 Internal fixation devices, [N: including fasteners and spinal fixators, even if a part thereof projects from the skin (**bone staples** [A61B17/064B](#); **dental regeneration membranes** [A61C8/00C1A](#))] [N9509] [C0305]

[N: **WARNING** [N0807]

Subgroups [A61B17/68P](#) and [A61B17/68S](#) are not complete pending a reorganisation. See also [A61B17/68](#), [A61B17/68D](#) and [A61B17/86](#)]

A61B17/68D	. . . .	[N: comprising bone transfixation elements, e.g. bolt with a distal cooperating element such as a nut] [N9707] [C0004]
A61B17/68E	. . . .	[N: Elements to be fitted on the end of screws or wires, e.g. protective caps] [N9707] [C1205]
A61B17/68P	. . . .	[N: Plugs, i.e. elements forming interface between bone hole and implant or fastener, e.g. screw] [N0807] [C1205]
A61B17/68S	. . . .	[N: for reattaching pieces of the skull] [N0807]
A61B17/70	. . . .	Spinal positioners or stabilisers; [N: Bone stabilisers comprising fluid filler in an implant] [N9509] [C1206]
A61B17/70B	. . . . .	[N: Screws or hooks combined with longitudinal elements which do not contact vertebrae (A61B17/70J takes precedence)] [N9509] [C1005]
A61B17/70B1	. . . . .	[N: Longitudinal elements, e.g. rods] [N0801]
A61B17/70B1C	. . . . .	{7 dots} [N: with a cross-section which varies along its length (A61B17/70B1R takes precedence)] [N0801] [C1205]
A61B17/70B1C2	. . . . .	{8 dots} [N: Parts of the longitudinal elements, e.g. their ends, being specially adapted to fit in the screw or hook heads] [N0801]
A61B17/70B1C4	. . . . .	{8 dots} [N: Parts of the longitudinal elements, e.g. their ends, being specially adapted to fit around the screw or hook heads] [N0801]
A61B17/70B1C6	. . . . .	{8 dots} [N: with parts of, or attached to, the longitudinal elements, bearing against an outside of the screw or hook heads, e.g. nuts on threaded rods (A61B17/70B1C4 takes precedence)] [N0801]
A61B17/70B1E	. . . . .	{7 dots} [N: Longitudinal elements with a non-circular, e.g. rectangular, cross-section (A61B17/70B1C2 , A61B17/70B1C4 take precedence)] [N0801] [C1205]
A61B17/70B1G	. . . . .	{7 dots} [N: Longitudinal element being non-straight, e.g. curved, angled or branched (adjustable length longitudinal elements A61B17/70B1L ; A61B17/70B1R takes precedence, e.g. coil springs)] [N0801] [C1205]
A61B17/70B1G2	. . . . .	{8 dots} [N: the shape of the element being adjustable before use (adjustable length plates A61B17/70B1L)] [WARNING: incomplete, see A61B17/70B1 and A61B17/70B1G] [N1204] [C1208]
A61B17/70B1L	. . . . .	{7 dots} [N: with means for adjusting the distance between two screws or hooks] [N1012]
A61B17/70B1L4	. . . . .	{8 dots} [N: electric or electromagnetic means] [N1012]
A61B17/70B1L6	. . . . .	{8 dots} [N: pneumatic or hydraulic means] [N1012]
A61B17/70B1R	. . . . .	{7 dots} [N: Longitudinal elements which have flexible parts, or are connected together such that in use they can move relative to each other] [N0801] [C1205]
A61B17/70B1R2	. . . . .	{8 dots} [N: having a core or insert, and a sleeve, whereby a screw or hook can move along the core or in the sleeve] [N1204] [C1208]
A61B17/70B1R4	. . . . .	{8 dots} [N: Tethers, i.e. longitudinal elements capable of transmitting tension only, e.g. cables, sutures] [N1204]
A61B17/70B1R6	. . . . .	{8 dots} [N: with a pivot joint] [N1204]
A61B17/70B1R8	. . . . .	{8 dots} [N: with a sliding joint] [N1204]
A61B17/70B1R10	. . . . .	{8 dots} [N: with a part that is flexible due to its form] [N1204]

A61B17/70B1R10B	. . . . .	{9 dots} [N: the flexible part being a coil spring] [N1204]
A61B17/70B1R10D	. . . . .	{9 dots} [N: the entire longitudinal element being flexible] [N1204]
A61B17/70B1R12	. . . . .	{8 dots} [N: made wholly or partly of flexible material] [N1204]
A61B17/70B2	. . . . .	[N: Screws or hooks with U-shaped head or back through which longitudinal rods pass] [N9609] [C0907]
A61B17/70B2L	. . . . .	{7 dots} [N: characterised by a lateral opening] [N0807] [C0907]
A61B17/70B5	. . . . .	[N: Screws or hooks, wherein a rod-clamping part and a bone-anchoring part can pivot relative to each other] [N0806]
A61B17/70B5B	. . . . .	{7 dots} [N: wherein pivoting is blocked when the rod is clamped] [N0806] [C0907]
A61B17/70B5D	. . . . .	{7 dots} [N: to a different extent in different directions, e.g. within one plane only] [N0806] [C0907]
A61B17/70B5F	. . . . .	{7 dots} [N: the longitudinal element passing through a ball-joint in the screw head] [N0806]
A61B17/70B6	. . . . .	[N: with single longitudinal rod offset laterally from single row of screws or hooks (A61B17/70B8 takes precedence)] [N9901] [C0206]
A61B17/70B7	. . . . .	[N: with a longitudinal element fixed to one or more transverse elements which connect multiple screws or hooks] [N0806]
A61B17/70B8	. . . . .	[N: also having plates, staples or washers bearing on the vertebrae] [N0106]
A61B17/70B10	. . . . .	[N: the screws or hooks being mobile in use relative to the longitudinal element (A61B17/70B5 takes precedence)] [WARNING: incomplete see A61B17/70B] [N1204]
A61B17/70C	. . . . .	[N: Clamps comprising opposed elements which grasp one vertebra between them] [N1107]
A61B17/70D	. . . . .	[N: Connectors, not bearing on the vertebrae, for rigidly linking longitudinal elements together (A61B17/70G , A61B17/70E , A61B17/70B1R take precedence)] [N9509] [C1205]
A61B17/70D2	. . . . .	[N: for linking adjacent ends of longitudinal elements] [N0805] [C0807]
A61B17/70D4	. . . . .	[N: of variable length] [N0805]
A61B17/70E	. . . . .	[N: attached by wires, straps, sutures or cables] [N0206]
A61B17/70G	. . . . .	[N: connected to sacrum, pelvis or skull] [N9509]
A61B17/70H	. . . . .	[N: Hooks with specially-designed bone-contacting part] [C0907]
		[N: WARNING [C0807] Not complete, see also A61B17/70B , A61B17/70B2 and A61B17/70B5]
A61B17/70J	. . . . .	[N: Plates mounted on top of bone anchor heads or shoulders] [N0004]
A61B17/70K	. . . . .	[N: Cortical plates] [N0004]
A61B17/70L	. . . . .	[N: for stabilising vertebrae or discs by improving the condition of their tissues, e.g. using implanted medication or fluid exchange (intraosseous injection devices A61B17/34L)] [N1109]
A61B17/70P	. . . . .	[N: Devices acting on, attached to, or simulating the effect of, vertebral processes, vertebral facets or ribs (rib fixation devices A61B17/80H6); Tools for such devices] [C1005]
A61B17/70P2	. . . . .	[N: Devices acting on, attached to, or simulating the effect of, vertebral facets; Tools therefor] [N0807] [C1107]
A61B17/70P4	. . . . .	[N: Devices with changeable shape, e.g. collapsible or having

		retractable arms to aid implantation; Tools therefor] [N1006] [C1010]
A61B17/70P6	. . . . .	[N: Devices bearing against one or more spinous processes and also attached to another part of the spine; Tools therefor] [N1006] [C1010]
A61B17/70P8	. . . . .	[N: Devices comprising separate rigid parts, assembled in situ, to bear on each side of spinous processes; Tools therefor] [N1006] [C1010]
A61B17/70P10	. . . . .	[N: Devices acting on, or attached to, a transverse process or rib; Tools therefor] [N1006] [C1010]
A61B17/70Q	. . . . .	[N: for expanding or repairing the vertebral arch or wedged between laminae or pedicles] [N0305] [C1006]
A61B17/70T	. . . . .	[N: Tools specially adapted for spinal fixation operations other than for bone removal or filler handling (A61B17/70P , A61B17/80J , A61B17/88C2D take precedence; for spinal image producing devices A61B19/00N ; markers A61B19/00R)] [N1010] [C1205]
A61B17/70T2	. . . . .	[N: for driving, positioning or assembling spinal clamps or bone anchors specially adapted for spinal fixation] [N1010]
A61B17/70T2B	. . . . .	{7 dots} [N: for moving bone anchors attached to vertebrae, thereby displacing the vertebrae] [N1010]
A61B17/70T2B2	. . . . .	{8 dots} [N: Tools requiring anchors to be already mounted on an implanted longitudinal or transverse element, e.g. where said element guides the anchor motion] [N1010]
A61B17/70T2B5	. . . . .	{8 dots} [N: with tubular extensions coaxially mounted on the bone anchors] [N1010]
A61B17/70T2D	. . . . .	{7 dots} [N: for driving, i.e. rotating, screws or screw parts specially adapted for spinal fixation, e.g. for driving polyaxial or tulip-headed screws (driving other bone screws A61B17/88S)] [N1010]
A61B17/70T4	. . . . .	[N: Tools for guidance or insertion of tethers, rod-to-anchor connectors, rod-to-rod connectors, or longitudinal elements] [N1011]
A61B17/70T4C	. . . . .	{7 dots} [N: for insertion of a longitudinal element down one or more hollow screw or hook extensions, i.e. at least a part of the element within an extension has a component of movement parallel to the extension's axis] [N1010]
A61B17/70T4E	. . . . .	{7 dots} [N: Rod reducers, i.e. devices providing a mechanical advantage to allow a user to force a rod into or onto an anchor head other than by means of a rod-to-bone anchor locking element; rod removers] [N1010] [C1205]
A61B17/70T4E2	. . . . .	{8 dots} [N wherein the rod is moved transverse to the axis of the bone anchor]
A61B17/70T4G	. . . . .	{7 dots} [N: wherein insertion is along an arcuate path] [N1010]
A61B17/70T10	. . . . .	[N: for applying, tightening or removing longitudinal element-to-bone anchor locking elements, e.g. caps, set screws, nuts or wedges] [N1010]
A61B17/70T21	. . . . .	[N: for checking pedicle hole has correct depth or has an intact wall (pedicle drill depth limiters A61B17/16D8)] [N1010]
A61B17/70U	. . . . .	[N: Solid vertebral fillers; devices for inserting such fillers] [N0806] [C1205]
A61B17/70U2	. . . . .	[N: the filler comprising unlinked macroscopic particles] [N1010]
		[N: WARNING [N1010] This group is not complete pending a reorganisation; see also group A61B17/70U]

A61B17/70V	. . . . .	[N: Stabilisers comprising fluid filler in an implant, e.g. balloon; devices for inserting or filling such implants (disc prostheses made of inflatable chambers or pockets filled with fluid A61F2/44B ; replacing the nucleus pulposus K61F2/44D6)] [N0806] [C1205]
A61B17/70V2	. . . . .	[N: wherein the implant is permeable or has openings, e.g. fenestrated screw (hollow surgical screws A61B17/86D)] [N1109] [C1205]
A61B17/72	. . . . .	Intramedullary [N: pins, nails or other] devices [N: (A61B17/74D2 takes precedence)] [C1205]
A61B17/72B	. . . . .	[N: Flexible pins, e.g. ENDER pins] [N9509] [C1205]
A61B17/72C	. . . . .	[N: for bone lengthening or compression (A61B17/72E6 takes precedence)] [N9711] [C1205]
A61B17/72C2	. . . . .	[N: for bone compression] [N0807]
		[N: WARNING [C0807] Not complete, see also A61B17/72C]
A61B17/72E	. . . . .	[N: with special means of locking the nail to the bone] [N0806]
A61B17/72E2	. . . . .	[N: the nail having separate elements through which screws pass] [N0806] [C0904]
A61B17/72E4	. . . . .	[N: with locking pins or screws of special form] [N0806] [C0904]
A61B17/72E6	. . . . .	[N: with laterally expanding parts, e.g. for gripping the bone] [N1204]
A61B17/72E6B	. . . . .	{7 dots} [N: with fingers moving radially outwardly] [N1204]
A61B17/72E6E	. . . . .	{7 dots} [N: with expanding cylindrical parts] [N1204]
A61B17/72H	. . . . .	[N: with special cross-section of the nail] [N0806]
A61B17/72J	. . . . .	[N: for small bones, e.g. in the foot, ankle, hand or wrist] [N1204]
A61B17/74	. . . . .	Devices for the head [N: or neck or trochanter] of the femur [N: (trochanteric devices connected to the proximal part of an endoprosthetic femoral shaft A61F2/30B7 ; endoprosthetic internal fixation devices for the head or neck of the femur A61F2/36A)] [N9509] [C0002]
A61B17/74D	. . . . .	[N: having one or more longitudinal elements oriented along or parallel to the axis of the neck] [N1204]
A61B17/74D2	. . . . .	[N: the longitudinal elements coupled to an intramedullary nail] [N1204]
A61B17/74D4	. . . . .	[N: the longitudinal elements coupled to a plate opposite the femoral head] [N1204]
A61B17/74D6	. . . . .	[N: with means for adapting the angle between the longitudinal elements and the shaft axis of the femur] [N1204]
A61B17/80	. . . . .	Cortical plates [N: i.e. bone plates; Instruments for holding or positioning cortical plates, or for compressing bone attached to them (A61B17/70 takes precedence)] [N9509] [C1109]
A61B17/80A	. . . . .	[N: with means for extending or compressing the bone or bones] [N9509] [C1010]
A61B17/80A1	. . . . .	[N: the plate having a ratchet] [N0807] [C1010]
A61B17/80A2	. . . . .	[N: the extension or compression force being caused by interaction of the plate hole and the screws] [N0806] [C1010]
A61B17/80A5	. . . . .	[N: where the means are a separate tool rather than being part of the plate] [N1107]
A61B17/80B	. . . . .	[N: Variable length plates] [N0806] [C1205]
A61B17/80C	. . . . .	[N: Cushions, i.e. elements forming interface between bone plate and

- bone] [N0807]
- [N: **WARNING**[C0807]
Not complete, see also [A61B17/68](#) and [A61B17/80](#)
]
- A61B17/80D [N: having indirect contact with screw heads, or having contact with screw heads maintained with the aid of additional components, e.g. nuts, wedges or head covers] [N9707] [C1107]
- A61B17/80D2 [N: the additional component being inserted in the screw head] [N0806]
- A61B17/80D4 [N: the additional component being a cover over the screw head] [N0806]
- A61B17/80D6 [N: wherein the additional element surrounds the screw head in the plate hole] [N0806]
- A61B17/80F [N: immobilised relative to screws by interlocking form of the heads and plate holes, e.g. conical or threaded] [N9707]
- A61B17/80F2 [N: the interlocking form comprising a thread] [N1107]
- A61B17/80H [N: specially adapted for particular bones ([A61B17/70](#) and [A61B17/74](#) take precedence)] [N9707] [C0206]
- A61B17/80H2 [N: for pelvic reconstruction] [N0807]
- [N: **WARNING**[C0807]
Not complete, see also [A61B17/80H](#)
]
- A61B17/80H4 [N: for the jaw (protheses for mandibular reconstruction [A61F2/28B](#))] [N9807]
- A61B17/80H6 [N: for the ribs or the sternum] [N9807]
- A61B17/80J [N: Instruments for holding or positioning bone plates, or for adjusting screw-to-plate locking mechanisms] [N1012]
- A61B17/80P [N: with pliable or malleable elements or having a mesh-like structure, e.g. small strips for craniofacial surgery ([A61B17/80H4](#), [A61B17/80H6](#) take precedence; connecting protheses with the body [A61F2/00](#))] [N9509] [C9807]
- A61B17/80S [N: with bone-penetrating elements, e.g. blade or prong for osteotomy (bone staples [A61B17/064B](#))] [N9509] [C0904]
- A61B17/80W [N: Osteotomy wedges][WARNING: incomplete see [A61B17/80S](#)] [N1204]
- [N: **WARNING**
[N1205]incomplete see [A61B17/80S](#)
]
- A61B17/82 for bone cerclage [N: (apparatus for manipulating wires or straps A61B17/88D; wires, bands or straps other than cerclage A61B17/84B)] [N9509] [C0607]
- A61B17/82K [N: for the sternum] [N9604]
- A61B17/82N [N: Nets or webs] [N0807]
- [N: **WARNING**[C0807]
Not complete, see also [A61B17/68](#) and [A61B17/82](#)
]
- A61B17/84 Fasteners therefor [N: or fasteners being internal fixation devices] [N9509] [C1205]

A61B17/84B	. . . . .	[N: Flexible wires, bands or straps (A61B17/72 , A61B17/82 , A61B17/86 take precedence)] [N9509] [C1205]
A61B17/84E	. . . . .	[N: with expandable anchors or anchors having movable parts] [N1204]
A61B17/84N	. . . . .	[N: Nails or pins, i.e. anchors without movable parts, holding by friction only, with or without structured surface (A61B17/72 , A61B17/86 take precedence)] [N1204]
A61B17/84N2	. . . . .	[N: Kirschner wires, i.e. thin, long nails] [N1204]
A61B17/86	. . . . .	[N: Threaded wires], pins or screws; [N: Nuts therefor (A61B17/72 , A61B17/74 , A61F2/44F take precedence)] [N9509] [C0004]
		[N: WARNING [N0807] Subgroups A61B17/86A2 , A61B17/86H , A61B17/86N , A61B17/86T and A61B17/86W are not complete pending a reorganisation. See also A61B17/68 , A61B17/86 , A61B17/86A and A61B19/02P]
A61B17/86A	. . . . .	[N: Heads, i.e. proximal ends projecting from bone] [N9707]
A61B17/86A2	. . . . .	{7 dots} [N: specially shaped for gripping driver] [N0807]
A61B17/86A2C	. . . . .	{8 dots} [N: at the central region of the screw head] [N1204]
A61B17/86A2P	. . . . .	{8 dots} [N: at the periphery of the screw head] [N1204]
A61B17/86B	. . . . .	[N: Shanks, i.e. parts contacting bone tissue (screw-in dental implants A61C8/00F)] [N9707] [C0106]
A61B17/86B2	. . . . .	{7 dots} [N: with thread interrupted or changing its form along shank, other than constant taper] [N9707] [C1205]
A61B17/86B4	. . . . .	{7 dots} [N: Tips of screws] [N9707]
A61B17/86D	. . . . .	[N: hollow, e.g. with socket or cannulated] [N9707] [C1205]
A61B17/86G	. . . . .	[N: Headless screws, e.g. ligament interference screws] [N9707]
A61B17/86H	. . . . .	[N: Packages or dispensers for bone screws or threaded wires] [N0807]
A61B17/86M	. . . . .	[N: Material or manufacture] [N9707]
A61B17/86N	. . . . .	[N: Nuts] [N0807]
A61B17/86P	. . . . .	[N: comprising multiple separate parts] [N9707][C0305]
A61B17/86T	. . . . .	[N: characterised by an open form, e.g. wire helix] [N0807]
A61B17/86W	. . . . .	[N: Washers (surrounding screw head in plate hole A61B17/80D6 , between bone plate and bone A61B17/80C)] [N0807]
A61B17/88	. . . . .	[N: Osteosynthesis instruments;]Methods or means for implanting or extracting internal [N: or external] fixation devices [N9509] [C0408]
A61B17/88A	. . . . .	[N: Equipment for handling bone cement or other fluid fillers (plugs or restrictors for bone cement A61F2/30B1)] [N1109] [C1205]
A61B17/88A2	. . . . .	[N: for introducing fluid filler into bone or extracting it (A61B17/70V , A61B17/88A4 take precedence; for introducing bone graft A61F2/46A)] [N1109] [C1205]
A61B17/88A2A	. . . . .	[N: with sealing collar for bone cavity] [N1109]
A61B17/88A2C	. . . . .	[N: characterised by the introducer tip, i.e. the part inserted into or onto the bone] [N1109] [C1205]
A61B17/88A2E	. . . . .	[N: characterised by the conduit, e.g. tube, along which fluid flows into the body or by conduit connections] [N1109]
A61B17/88A2G	. . . . .	[N: characterised by the introducer proximal part, e.g. cannula handle, or by parts which are inserted inside each other, e.g. stylet and cannula (A61B17/88A2J takes precedence)] [N1109] [C1208]

A61B17/88A2H	. . . . .	[N: characterised by means facilitating expulsion of fluid from the introducer, e.g. a screw pump plunger, hydraulic force transmissions, application of vibrations or a vacuum] [N1109] [C1205]
A61B17/88A2J	. . . . .	[N: characterised by syringe details (A61B17/88A2H , A61B17/88A2V take precedence)] [N1109] [C1205]
A61B17/88A2V	. . . . .	[N: with filtering, degassing, venting or pressure relief means]
A61B17/88A4	. . . . .	[N: Tools for preparing, e.g. curing, cement or other fluid fillers (B01F takes precedence); Means for supplying cement or other fluid fillers to an introducing tool, e.g. cartridge handling means] [N1109] [C1205]
A61B17/88A4C	. . . . .	[N: for heating, cooling or curing the filler] [N1109]
A61B17/88A6	. . . . .	[N: the tool being specially adapted to engage a prosthesis] [N1109]
A61B17/88A22	. . . . .	[N: for removing cement from a bone cavity (using surgical bone chisels, drills, mills, rasps, reamers or scrapers A61B17/16 ; using laser A61B18/20 ; using ultrasonic surgical instruments A61N7/00] [N1109]
A61B17/88C	. . . . .	[N: Tools for expanding or compacting bones or discs or cavities therein (A61B17/88A2 , A61B17/70V take precedence)] [N1109] [C1205]
A61B17/88C2	. . . . .	[N: capable of being assembled or enlarged, or changing shape, inside the bone or disc] [N1109]
A61B17/88C2B	. . . . .	[N: inflatable, e.g. kyphoplasty balloons] [N1109]
A61B17/88C2D	. . . . .	[N: laterally or radially expansible (inflatable A61B17/88C2B)] [N1109]
A61B17/88D	. . . . .	[N: Apparatus for manipulating flexible wires or straps][N0407]
A61B17/88F	. . . . .	[N: Apparatus for shaping or cutting osteosynthetic equipment][N0407]
A61B17/88H	. . . . .	[N: for gripping or pushing bones, e.g. approximators][N0407] [C0607]
A61B17/88L	. . . . .	[N: Tensioning devices] [N0807]
A61B17/88P	. . . . .	[N: Instruments for putting said fixation devices against or away from the bone (A61B17/70T , A61B17/80J take precedence)] [N0407] [C1109]
A61B17/88S	. . . . .	[N: Screwdrivers, spanners or wrenches] [N9604] [C9711]
A61B17/88S2	. . . . .	[N: characterised by the cross-section of the driver bit] [N1204]
A61B17/88S2C	. . . . .	[N: the driver bit acting on the central region of the screw head] [N1204]
A61B17/88S2P	. . . . .	[N: the driver bit acting on the periphery of the screw head] [N1204]
A61B17/88S4	. . . . .	[N: holding the screw head] [N1204]
A61B17/88S4C	. . . . .	[N: at its central region] [N1204]
A61B17/88S4P	. . . . .	[N: at its periphery] [N1204]
A61B17/88S6	. . . . .	[N: holding the implant into or through which the screw is to be inserted (A61B17/70T2D , A61B17/70T10 take precedence)] [N1204]
A61B17/88T	. . . . .	[N: Guide wires or guide pins] [N0807]
		[N: WARNING [C0807] Not complete, see also A61B17/88]
A61B17/92	. . . . .	Impactors or extractors, e.g. for removing intramedullary devices [N: (insertion or extraction of artificial joints A61F2/46B)] [N9509] [C9604]
A61B17/92B	. . . . .	[N: for intramedullary devices] [N9604]

A61B18/00

Surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body (eye surgery [A61F9/00Z](#); ear surgery [A61F11/00](#)) [N9701]

- A61B18/02 . . . by cooling, e.g. cryogenic techniques (devices for cooling specific reflex points of the body within cell-life limits [A61H39/06](#)) [N9702]
- A61B18/02B . . . [N: ultrasonic, e.g. for destroying tissue or enhancing freezing] [N9702]
- A61B18/02D . . . [N: with open-end cryogenic probe, e.g. for spraying fluid directly on tissue or via a tissue-contacting porous tip] [N9702]
- A61B18/04 . . . by heating (by applying electromagnetic radiation [A61B18/18](#); hyperthermia using electric or magnetic fields, radiation or ultrasound [A61N](#)) [N9702]
- A61B18/04B . . . [N: using additional gas becoming plasma] [N1204]
- A61B18/06 . . . caused by chemical reaction, [N: e.g. moxaburners] [N9702]
- A61B18/08 . . . by means of electrically-heated probes [N9702]
- A61B18/08B [N: Probes or electrodes therefor] [N9702]
- A61B18/08B4 [N: Forceps, scissors] [N9702]
- A61B18/10 Power sources therefor [N9702]
- A61B18/12 . . . by passing a current through the tissue to be heated, e.g. high-frequency current [N9702]
- A61B18/12G [N: Generators therefor] [N9702] [C1207]
- A61B18/12G6 [N: with circuits for assuring patient safety] [N9702]
- A61B18/14 Probes or electrodes therefor [N9702]
- A61B18/14B [N: Probes for open surgery] [N0003] [C1207]
- A61B18/14F [N: Probes having pivoting end effectors, e.g. forceps] [N9702] [C1207]
- A61B18/14F2 [N: at the distal end of a shaft, e.g. forceps or scissors at the end of a rigid rod] [N0004] [C1207]
- A61B18/14F2V [N: wherein sliding surfaces cause opening/closing of the end effectors] [N0004] [C1207]
- A61B18/14N [N: Needle-like probes] [N9710] [C1207]
- A61B18/14P [N: having a short, rigid shaft for accessing the inner body transcutaneously, e.g. for neurosurgery or arthroscopy] [N9812] [C1207]
- A61B18/14R [N: having a long rigid shaft for accessing the inner body transcutaneously in minimal invasive surgery, e.g. laparoscopy] [N9702] [C1207]
- A61B18/14S [N: having a short rigid shaft for accessing the inner body through natural openings] [N9702] [C1207]
- A61B18/14T [N: Trocar-like, i.e. devices producing an enlarged transcutaneous opening] [N9702]
- A61B18/14U [N: bow shaped or with rotatable body at cantilever end, e.g. for resectoscopes, or coagulating rollers] [N0003]
- A61B18/14V [N: having a flexible, catheter-like structure, e.g. for heart ablation ([A61B18/14N](#) takes precedence)] [N9702] [C9710]
- A61B18/16 Indifferent or passive electrodes for grounding [N9702]
- A61B18/18 . . . by applying electromagnetic radiation, e.g. microwaves (radiation therapy [A61N5/00](#)) [N9702]
- A61B18/18M . . . using microwaves [N1105]
- A61B18/20 . . . using laser [N9702]
- A61B18/20B [N: the beam being delivered through a hollow tube, e.g. forming an articulated arm (through a flexible conduit [A61B18/22](#)); Hand-pieces therefor] [N9702]

- A61B18/20H . . . [N: applying laser energy to the outside of the body] [N0001] [C1207]
- A61B18/22 . . . the beam being directed along or through a flexible conduit, e.g. an optical fibre; [N: Couplings], hand-pieces therefor [N9702]
- A61B18/24 with a catheter ([A61B18/26](#), [A61B18/28](#) take precedence) [N9702]
- A61B18/24B [N: for removing obstructions in blood vessels or calculi] [N9702]
- A61B18/26 for producing a shock wave, e.g. laser lithotripsy [N9702]
- A61B18/28 for heating a thermal probe or absorber [N9702]

A61B19/00 **Instruments, implements or accessories for surgery or diagnosis not covered by any of the groups [A61B1/00](#) to [A61B17/00](#), e.g. for stereotaxis, sterile operation, luxation treatment, wound edge protectors** ([N: surgeon`s or patient`s gowns or dresses, surgical masks [A41D13/00](#)]; devices for carrying-off, for treatment of, or for carrying-over, body liquids [A61M1/00](#))

[N: **WARNING** [N1206]

Groups [A61B19/20](#) - [A61B19/56L](#) do not correspond to former or current IPC groups. Concordance ECLA : IPC for these groups is as follows: - [A61B19/20](#) - [A61B19/56](#) : [A61B19/00](#)

]

- A61B19/02 . Protective casings or covers for appliances or instruments, e.g. boxes or sterile covers; Instrument tables or cupboards; Doctors` bags [N: (cleaning devices for surgical instruments [A61B19/00C](#); instrument-protective drapes [A61B19/08B](#); for sterilising articles [A61L2/00](#); for cleaning for sterilising hypodermic or infusion needles or syringes [A61M5/00C](#); for preservation of living parts of the human or animal body [A01N1/02](#))] [C9412]
- A61B19/02F . . [N: Furniture specially adapted for surgery or diagnosis, e.g. cabinets, carts, cupboards or tables (supports for surgeons [A61B19/00J](#); medicine cabinets [A47B67/00](#); accommodation for nursing [A61G12/00](#))]
- A61B19/02H . . [N: Holders for articles, e.g. magnetic holders, racks, stands (holders for suture needles or materials [A61B17/06H](#); supports as part of surgical instruments [A61B19/00H](#); drapes with means to hold surgical instruments [A61B19/10](#); hangers for particular articles [A47F7/00](#); for tooth drills [A61C3/04](#); for receptacles and tubing attached to beds [A61G7/05H](#); for pharmaceutical containers [A61J1/16](#); for irrigation devices [A61M3/02E](#); racks for syringes or for hypodermic or infusion needles [A61M5/00S](#); for infusion devices [A61M5/14R](#); for catheters [A61M25/02](#); holding devices for laboratory apparatus [B01L9/00](#); racks for work tools [B25H3/04](#))] [C9412]
- A61B19/02P . . [N: Casings for packaging, protecting or dispensing articles (for endoscopes [A61B1/00J](#); for test samples [A61B10/00S](#); for sutures [A61B17/06P](#); for ligaturing clips [A61B17/122C](#); for gloves or finger-stalls [A61B19/04P](#); for dental floss [A61C15/04C](#); for dental instruments [A61C19/02](#); for prostheses [A61F2/00P](#); for contraceptive devices [A61F6/00P](#); for bandages or the like [A61F15/00B](#); for pharmaceutical products [A61J1/00](#); for catheters [A61M25/00P](#); in general [B65D](#), e.g. with dispensing means [B65D83/00](#); for ampoules [B65D85/42](#); for clinical thermometers [G01K1/08B](#); for optical fibres [G02B6/44C8A](#); for X-ray films [G03C3/00D](#))] [C9412]
- A61B19/02P2 . . . [N: for sharps (for suture needles [A61B17/06P](#); for scalpel-blades [A61B17/3215](#); for wound clamps [A61B17/10P](#); for used sharps [A61B19/02R2](#); for syringes or for hypodermic or infusion needles [A61M5/00P](#), [A61M5/162B](#), [A61M5/32B](#))] [C1204]
- A61B19/02P4 . . . [N: Carrying bags, cases, trusses (bags for midwives [A61B17/48](#); bags in general [A45C](#); first-aid kits [A61F17/00](#))] [C9412]
- A61B19/02P4D [N: Doctors` or nurses` bags]

- A61B19/02P6 . . . [N: Trays (serving trays [A47G23/06](#))]
- A61B19/02R . . [N: Casings for removing or collecting used articles (for sutures [A61B17/06R](#); accessories for operating tables, e.g. for collecting body wastes [A61G13/10](#); combustible sputum cups [A61J19/06](#); sterilising refuse [A61L11/00](#); for destroying hypodermic or infusion needles or syringes [A61M5/32C4](#); disposal of medical waste by destroying it or transforming it into something useful or harmless [B09B3/00M](#); for domestic refuse or the like [B65F](#))] [C9412]
- A61B19/02R2 . . . [N: for sharps (for suture needles [A61B17/06R](#); for scalpel-blades [A61B17/3217](#); for syringes or for hypodermic or infusion needles [A61M5/32C](#))] [C1204]
- A61B19/02R8 . . . [N: for absorbent articles, e.g. bandages, cotton balls, covers, drapes, dressings, garments, gauze, gowns, napkins, sponges, swabs or towels (devices for determining blood loss [A61B5/14D](#))] [C9412]
- A61B19/04 . Operating gloves; Finger-stalls for operating; Devices for treating them, e.g. cleaning, powdering (glove-boxes for manipulating, gloves therefor [B25J21/02](#))
- A61B19/04D . . [N: Devices for detecting perforations in surgical gloves or finger-stalls]
- A61B19/04P . . [N: Packages or dispensers for gloves or finger-stalls]
- A61B19/08 . Surgical drapes (bandages, dressings or absorbent pads [A61F13/00](#))
- A61B19/08B . . [N: for protection of instruments, e.g. microscopes (for part of endoscope entering the body [A61B1/00J](#))] [C9412]
- A61B19/08G . . [N: for surgery through the lower body openings, e.g. urology, gynaecology]
- A61B19/08L . . [N: Drape material, e.g. laminates; Manufacture thereof]
- A61B19/10 . . with means to retain or hold surgical implements [N: (holders for articles [A61B19/02H](#))]
- A61B19/12 . . tubular, e.g. for arms or legs [N: ([A61B19/08G](#) takes precedence)]
- A61B19/20 . [N: for stereotaxic surgery (using radio-opaque markers [A61B19/54](#))] [N1204]
- A61B19/20B . . [N: with needle or instrument guides, e.g. arcuate slides, ball joints (needle guiding or locating means [A61B17/34D](#))] [N1204]
- A61B19/20D . . [N: Fixators for body parts, e.g. head fixators, skull clamps or bite blocks (tables with compression means for mammography [A61B6/04D2](#); tables with patient immobilising means for radiation diagnosis [A61B6/04F](#)); Constructional details thereof, e.g. fixating pins (bone screws or pins [A61B17/86](#))] [N1204]
- A61B19/22 . [N: Manipulators specially adapted for use in surgery] [N1204]
- A61B19/22B . . [N: Surgical robots] [N1204]
- A61B19/24 . [N: Devices for expanding tissue, e.g. skin tissue (implements for holding wounds open, surgical tractors [A61B17/02](#); implantable mammary prosthesis [A61F2/12](#); dilators [A61M29/00](#))] [N1204]
- A61B19/26 . [N: Supports as part of surgical instruments, e.g. articulated arms, headbands ([A61B19/22](#) takes precedence; holders for articles [A61B19/02H](#))] [N1204]
- A61B19/28 . [N: Supports for surgeons, e.g. chairs, hand supports (seats for the dentist or surgeon associated with dental or operating chairs [A61G15/00](#))] [N1204]
- A61B19/30 . [N: Automatic limiting or abutting means, e.g. for safety] [N1204]
- A61B19/34 . [N: Cleaning devices specially adapted for surgical instruments (disinfecting [A61L2/00](#); cleaning in general [B08B](#))] [N1204]

- A61B19/36 . [N: Implements for cleaning or washing surgeon`s hands or patient`s skin (hand-held absorbent pads or swabs containing a cleaning liquid, e.g. in a rupturable reservoir, A61M35/00B2)] [N1204]
- A61B19/38 . [N: Apparatus for sterile operations, e.g. apparatus fixed to patient for providing an aseptic surgical environment] [N1204]
- A61B19/40 . [N: Protection of tissue around surgical sites against effects of non-mechanical surgery, e.g. laser surgery (protection of eyes against laser radiation A61F9/02F)] [N1204]
- A61B19/42 . [N: Splash shields for protection of the surgeon, e.g. splash guards connected to the apparatus (A41D13/00F takes precedence)] [N1204]
- A61B19/44 . [N: Identification means for patients or instruments, e.g. identification tags] [N1204]
- A61B19/46 . [N: Measuring instruments not otherwise provided for (for implanting artificial joints A61F2/46M)] [N1204]
- A61B19/50 . [N: Computer-aided planning, simulation or modeling of a surgical operation] [N1204]
- A61B19/52 . [N: Image-producing devices or illumination devices not otherwise provided for, e.g. operation microscopes; Operation lamp handles] [N1204]
- A61B19/52B . . [N: Devices for illuminating a surgical field] [N1204]
- A61B19/52D . . [N: Image-producing devices, e.g. surgical cameras (A61B19/52F, A61B19/52H take precedence)] [N1204]
- A61B19/52F . . [N: Surgical microscopes] [N1204]
- A61B19/52H . . [N: Surgical systems with images on a monitor during operation] [N1204]
- A61B19/52H12 . . . [N: Systems for tracking the position of an instrument during image guided surgery, e.g. surgical navigation systems] [N1204]
- A61B19/54 . [N: Markers, e.g. radio-opaque or breast lesions markers (mechanical markers for eye-keratotomy A61F9/013M; markers in surgical tampons or sponges A61F13/44; markers on catheters A61M25/01C1)] [N1204]
- A61B19/56 . [N: User interfaces for surgical systems] [N1204]