

# CPC COOPERATIVE PATENT CLASSIFICATION

## A HUMAN NECESSITIES

### HEALTH; AMUSEMENT

#### A61 MEDICAL OR VETERINARY SCIENCE; HYGIENE

**A61N ELECTROTHERAPY; MAGNETOTHERAPY; RADIATION THERAPY; ULTRASOUND THERAPY** (measurement of bioelectric currents [A61B](#); surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body [A61B 18/00](#); anaesthetic apparatus in general [A61M](#); incandescent lamps [H01K](#); infra-red radiators for heating [H05B](#))

#### NOTE

In this subclass, the following term is used with the meaning indicated: In this subclass, the following term is used with the meaning indicated:

- "therapy" implies that the treatment, when it aims at destroying sick or abnormal cells, is performed within the limits of healthy cell life, the destruction thereof being undesired, contrary to that which takes place with instruments, devices or methods covered by group [A61B 18/00](#).

#### WARNING

The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:

<a href="#">A61N 1/34</a>	covered by	<a href="#">A61N 1/36021</a> , <a href="#">A61N 1/36071</a>
<a href="#">A61N 2/04</a>	covered by	<a href="#">A61N 2/02</a>
<a href="#">A61N 5/067</a>	covered by	<a href="#">A61N 5/06</a>
<a href="#">A61N 5/08</a>	covered by	<a href="#">A61N 5/06</a>
<a href="#">A61N 2/08</a>	covered by	<a href="#">A61N 2/06</a>
<a href="#">A61N 2/10</a>	covered by	<a href="#">A61N 2/06</a>
<a href="#">A61N 5/073</a>	covered by	<a href="#">A61N 5/06</a> , <a href="#">A61N 2005/073</a>

<b>1/00</b>	<b>Electrotherapy; Circuits therefor</b> ( <a href="#">A61N 2/00</a> takes precedence; irradiation apparatus <a href="#">A61N 5/00</a> )	1/046	. . . . .	{Specially adapted for shock therapy, e.g. defibrillation}
1/02	. Details	1/0464	. . . . .	{Specially adapted for promoting tissue growth}
1/025	. . {Digital circuitry features of electrotherapy devices, e.g. memory, clocks, processors}	1/0468	. . . . .	{Specially adapted for promoting wound healing}
1/04	. . Electrodes {(electrosurgical electrodes <a href="#">A61B 18/14</a> )}	1/0472	. . . . .	{Structure-related aspects}
1/0404	. . . {for external use ( <a href="#">A61N 1/06</a> takes precedence)}	1/0476	. . . . .	{Array electrodes (including any electrode arrangement with more than one electrode for at least one of the polarities)}
1/0408	. . . . {Use-related aspects}	1/048	. . . . .	{Electrodes characterised by a specific connection between lead and electrode}
1/0412	. . . . . {Specially adapted for transcutaneous electroporation, e.g. including drug reservoirs}	1/0484	. . . . .	{Garment electrodes worn by the patient}
1/0416	. . . . . {Anode and cathode}	1/0488	. . . . .	{Details about the lead}
1/042	. . . . . {Material of the electrode}	1/0492	. . . . .	{Patch electrodes ( <a href="#">A61N 1/0412</a> , <a href="#">A61N 1/0428</a> take precedence)}
1/0424	. . . . . {Shape of the electrode}	1/0496	. . . . .	{characterised by using specific chemical compositions, e.g. hydrogel compositions, adhesives}
1/0428	. . . . . {Specially adapted for iontophoresis, e.g. AC, DC or including drug reservoirs}	1/05	. . .	for implantation or insertion into the body, e.g. heart electrode ( <a href="#">A61N 1/06</a> takes precedence)
1/0432	. . . . . {Anode and cathode}	1/0502	. . . . .	{Skin piercing electrodes}
1/0436	. . . . . {Material of the electrode}	1/0504	. . . . .	{Subcutaneous electrodes}
1/044	. . . . . {Shape of the electrode}	1/0507	. . . . .	{Electrodes for the digestive system}
1/0444	. . . . . {Membrane}	1/0509	. . . . .	{Stomach and intestinal electrodes}
1/0448	. . . . . {Drug reservoir}	1/0512	. . . . .	{Anal electrodes}
1/0452	. . . . . {Specially adapted for transcutaneous muscle stimulation [TMS]}	1/0514	. . . . .	{Electrodes for the urinary tract}
1/0456	. . . . . {Specially adapted for transcutaneous electrical nerve stimulation [TENS]}			

1/0517	. . . . {Esophageal electrodes}
1/0519	. . . . {Endotracheal electrodes}
1/0521	. . . . {Genital electrodes}
1/0524	. . . . {Vaginal electrodes}
1/0526	. . . . {Head electrodes ( <a href="#">A61N 1/0551</a> takes precedence)}
1/0529	. . . . {Electrodes for brain stimulation}
1/0531	. . . . {Brain cortex electrodes}
1/0534	. . . . {Electrodes for deep brain stimulation}
1/0536	. . . . {Preventing neurodegenerative response or inflammatory reaction}
1/0539	. . . . {Anchoring of brain electrode systems, e.g. within burr hole}
1/0541	. . . . {Cochlear electrodes}
1/0543	. . . . {Retinal electrodes}
1/0546	. . . . {Nasal electrodes}
1/0548	. . . . {Oral electrodes}
1/0551	. . . . {Spinal or peripheral nerve electrodes}
1/0553	. . . . {Paddle shaped electrodes, e.g. for laminotomy}
1/0556	. . . . {Cuff electrodes}
1/0558	. . . . {Anchoring or fixation means therefor}
1/056	. . . . {Transvascular endocardial electrode systems}
1/0563	. . . . {specially adapted for defibrillation or cardioversion}
1/0565	. . . . {Electrode heads}
1/0568	. . . . {with drug delivery}
1/057	. . . . {Anchoring means; Means for fixing the head inside the heart}
1/0573	. . . . {characterised by means penetrating the heart tissue, e.g. helix needle or hook}
1/0575	. . . . {with drug delivery}
2001/0578	. . . . {having means for removal or extraction}
2001/058	. . . . {Fixing tools}
2001/0582	. . . . {Suture sleeves}
2001/0585	. . . . {Coronary sinus electrodes}
1/0587	. . . . {Epicardial electrode systems; Endocardial electrodes piercing the pericardium}
1/059	. . . . {Anchoring means}
1/0592	. . . . {Introducing the lead through the pericardium with a needle}
1/0595	. . . . {Temporary leads}
1/0597	. . . . {Surface area electrodes, e.g. cardiac harness}
1/06	. . . for high-frequency therapy
1/08	. . Arrangements or circuits for monitoring, protecting, controlling or indicating {(for external stimulators <a href="#">A61N 1/3603</a> ; for implantable neurostimulators <a href="#">A61N 1/36128</a> ; for heart stimulators <a href="#">A61N 1/37</a> ; for defibrillators <a href="#">A61N 1/3925</a> )}

**WARNING**

Group [A61N 1/08](#) is impacted by reclassification into group [A61N 1/3603](#).

Groups [A61N 1/08](#) and [A61N 1/3603](#) should be considered in order to perform a complete search.

2001/083	. . . {Monitoring integrity of contacts, e.g. by impedance measurement}
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**WARNING**

Group [A61N 2001/083](#) is impacted by reclassification into group [A61N 1/3603](#).

Groups [A61N 2001/083](#) and [A61N 1/3603](#) should be considered in order to perform a complete search.

1/086	. . . {Magnetic resonance imaging [MRI] compatible leads}
1/10	. Applying static electricity (applying ionised gases or vapours <a href="#">A61N 1/44</a> )
1/14	. Leading-off electric charges, e.g. by earthing {(carrying-off electrostatic charges, in general <a href="#">H05F 3/00</a> )}
1/16	. Screening or neutralising undesirable influences from {or using,} atmospheric or terrestrial radiation or fields {(using atmospheric electricity or earth currents <a href="#">H05F 3/00</a> )}
1/18	. Applying electric currents by contact electrodes
1/20	. . continuous direct currents
1/205	. . . {for promoting a biological process}
1/22	. . . Electromedical belts {, e.g. neck chains, armbands}
1/24	. . . . with built-in power source
1/26	. . . Electromedical brushes; Electromedical massage devices {(massage devices in general <a href="#">A61H</a> ); Combs}
1/28	. . . Apparatus for applying thermoelectric currents
1/30	. . . Apparatus for iontophoresis, {i.e. transfer of media in ionic state by an electromotoric force into the body}, or cataphoresis
1/303	. . . . {Constructional details (electrodes for external use <a href="#">A61N 1/0428</a> )}
1/306	. . . . {Arrangements where at least part of the apparatus is introduced into the body}
1/32	. . alternating or intermittent currents {(applying electric fields by inductive or capacitive coupling <a href="#">A61N 1/40</a> ; microwave apparatus <a href="#">A61N 5/02</a> )}
1/321	. . . {Electromedical belts}
1/322	. . . {Electromedical brushes, combs, massage devices}
1/323	. . . {Interference currents, i.e. treatment by several currents summed in the body}
1/325	. . . {for iontophoresis, i.e. transfer of media in ionic state by an electromotoric force into the body (electrodes for external use <a href="#">A61N 1/0428</a> )}
1/326	. . . {for promoting growth of cells, e.g. bone cells}
1/327	. . . {for enhancing the absorption properties of tissue, e.g. by electroporation}
1/328	. . . {for improving the appearance of the skin, e.g. facial toning or wrinkle treatment}
1/36	. . . for stimulation

**WARNING**

Group [A61N 1/36](#) is impacted by reclassification into group [A61N 1/36002](#).

Groups [A61N 1/36](#) and [A61N 1/36002](#) should be considered in order to perform a complete search.

1/36002 . . . . {Cancer treatment, e.g. tumour}

#### **WARNING**

Group [A61N 1/36002](#) is incomplete pending reclassification of documents from group [A61N 1/36](#).

Groups [A61N 1/36002](#) and [A61N 1/36](#) should be considered in order to perform a complete search

1/36003 . . . . {of motor muscles, e.g. for walking assistance}

1/36007 . . . . {of urogenital or gastrointestinal organs, e.g. for incontinence control}

1/3601 . . . . {of respiratory organs}

1/36014 . . . . {External stimulators, e.g. with patch electrodes ([external pacemakers A61N 1/3625](#))}

#### **WARNING**

Group [A61N 1/36014](#) is impacted by reclassification into groups [A61N 1/3603](#), [A61N 1/36031](#) and [A61N 1/36034](#).

All groups listed in this Warning should be considered in order to perform a complete search.

1/36017 . . . . {with leads or electrodes penetrating the skin}

1/36021 . . . . {for treatment of pain}

1/36025 . . . . {for treating a mental or cerebral condition}

1/36028 . . . . {for aversion therapy}

1/3603 . . . . {Control systems}

#### **WARNING**

Group [A61N 1/3603](#) is incomplete pending reclassification of documents from groups [A61N 1/08](#), [A61N 2001/083](#) and [A61N 1/36014](#).

All groups listed in this Warning should be considered in order to perform a complete search.

1/36031 . . . . {using physiological parameters for adjustment}

#### **WARNING**

Group [A61N 1/36031](#) is incomplete pending reclassification of documents from group [A61N 1/36014](#).

Groups [A61N 1/36031](#) and [A61N 1/36014](#) should be considered in order to perform a complete search.

1/36034 . . . . {specified by the stimulation parameters}

#### **WARNING**

Group [A61N 1/36034](#) is incomplete pending reclassification of documents from group [A61N 1/36014](#).

Groups [A61N 1/36034](#) and [A61N 1/36014](#) should be considered in order to perform a complete search.

1/36036 . . . . {of the outer, middle or inner ear}

#### **WARNING**

Group [A61N 1/36036](#) is impacted by reclassification into groups [A61N 1/36038](#) and [A61N 1/36039](#).

Groups [A61N 1/36036](#), [A61N 1/36038](#) and [A61N 1/36039](#) should be considered in order to perform a complete search.

1/36038 . . . . {Cochlear stimulation}

#### **WARNING**

Groups [A61N 1/36038](#) and [A61N 1/36039](#) are incomplete pending reclassification of documents from group [A61N 1/36036](#).

Groups [A61N 1/36036](#), [A61N 1/36038](#) and [A61N 1/36039](#) should be considered in order to perform a complete search.

1/36039 . . . . {fitting procedures}

1/3604 . . . . {for correcting spinal deformities, e.g. scoliosis}

1/36042 . . . . {of grafted tissue, e.g. skeletal muscle}

1/36046 . . . . {of the eye}

1/3605 . . . . {Implantable neurostimulators for stimulating central or peripheral nerve system}

1/36053 . . . . {adapted for vagal stimulation ([A61N 1/36114 takes precedence](#))}

1/36057 . . . . {adapted for stimulating afferent nerves}

1/3606 . . . . {adapted for a particular treatment}

#### **WARNING**

Group [A61N 1/3606](#) is impacted by reclassification into group [A61N 1/36062](#).

Groups [A61N 1/3606](#) and [A61N 1/36062](#) should be considered in order to perform a complete search.

1/36062 . . . . {Spinal stimulation}

#### **WARNING**

Group [A61N 1/36062](#) is incomplete pending reclassification of documents from group [A61N 1/3606](#).

Groups [A61N 1/36062](#) and [A61N 1/3606](#) should be considered in order to perform a complete search.

- 1/36064 . . . . . {Epilepsy}
- 1/36067 . . . . . {Movement disorders, e.g. tremor or Parkinson disease ([stimulating motor muscle A61N 1/36003](#))}
- 1/36071 . . . . . {Pain}
- 1/36075 . . . . . {Headache or migraine}
- 1/36078 . . . . . {Inducing or controlling sleep or relaxation ([non-implantable stimulator A61M 21/00](#))}
- 1/36082 . . . . . {Cognitive or psychiatric applications, e.g. dementia or Alzheimer's disease}
- 1/36085 . . . . . {Eating disorders or obesity}
- 1/36089 . . . . . {Addiction or withdrawal from substance abuse such as alcohol or drugs}
- 1/36092 . . . . . {Mental training}
- 1/36096 . . . . . {Mood disorders, e.g. depression, anxiety or panic disorder}
- 1/361 . . . . . {Phantom sensations, e.g. tinnitus}
- 1/36103 . . . . . {Neuro-rehabilitation; Repair or reorganisation of neural tissue, e.g. after stroke}
- 1/36107 . . . . . {Sexual dysfunction ([stimulating genital organs A61N 1/36007](#))}
- 1/3611 . . . . . {Respiration control ([stimulating respiratory organs A61N 1/3601](#))}
- 1/36114 . . . . . {Cardiac control, e.g. by vagal stimulation ([stimulating the heart A61N 1/362](#))}
- 1/36117 . . . . . {for treating hypertension}
- 1/36121 . . . . . {Production of neurotransmitters; Modulation of genes expression}
- 1/36125 . . . . . {Details of circuitry or electric components}
- 1/36128 . . . . . {Control systems}
- 1/36132 . . . . . {using patient feedback}
- 1/36135 . . . . . {using physiological parameters}

**WARNING**

Group [A61N 1/36135](#) is impacted by reclassification into group [A61N 1/3614](#).

Groups [A61N 1/36135](#) and [A61N 1/3614](#) should be considered in order to perform a complete search.

- 1/36139 . . . . . {with automatic adjustment}
- 1/3614 . . . . . {based on impedance measurement}

**WARNING**

Group [A61N 1/3614](#) is incomplete pending reclassification of documents from group [A61N 1/36135](#).

Groups [A61N 1/3614](#) and [A61N 1/36135](#) should be considered in order to perform a complete search.

- 1/36142 . . . . . {for improving safety}
- 1/36146 . . . . . {specified by the stimulation parameters}
- 1/3615 . . . . . {Intensity}

- 1/36153 . . . . . {Voltage ([A61N 1/3616](#) takes precedence)}

**WARNING**

Group [A61N 1/36153](#) is impacted by reclassification into group [A61N 1/3616](#).

Groups [A61N 1/36153](#) and [A61N 1/3616](#) should be considered in order to perform a complete search.

- 1/36157 . . . . . {Current ([A61N 1/3616](#) takes precedence)}

**WARNING**

Group [A61N 1/36157](#) is impacted by reclassification into group [A61N 1/3616](#).

Groups [A61N 1/36157](#) and [A61N 1/3616](#) should be considered in order to perform a complete search.

- 1/3616 . . . . . {Voltage density or current density}

**WARNING**

Group [A61N 1/3616](#) is incomplete pending reclassification of documents from groups [A61N 1/36153](#) and [A61N 1/36157](#).

Groups [A61N 1/3616](#), [A61N 1/36153](#), and [A61N 1/36157](#) should be considered in order to perform a complete search.

- 1/36164 . . . . . {Sub-threshold or non-excitatory signals ([non-excitatory signals to the heart A61N 1/3628](#))}
- 1/36167 . . . . . {Timing, e.g. stimulation onset}
- 1/36171 . . . . . {Frequency}
- 1/36175 . . . . . {Pulse width or duty cycle}
- 1/36178 . . . . . {Burst or pulse train parameters}
- 1/36182 . . . . . {Direction of the electrical field, e.g. with sleeve around stimulating electrode}
- 1/36185 . . . . . {Selection of the electrode configuration}
- 1/36189 . . . . . {using modulation techniques}
- 1/36192 . . . . . {Amplitude modulation}
- 1/36196 . . . . . {Frequency modulation}
- 1/362 . . . . . Heart stimulators ([heart defibrillators A61N 1/39](#))

**WARNING**

Group [A61N 1/362](#) is impacted by reclassification into group [A61N 1/3629](#).

Groups [A61N 1/362](#) and [A61N 1/3629](#) should be considered in order to perform a complete search.

- 1/3621 . . . . . {for treating or preventing abnormally high heart rate}

- 1/3622 . . . . . {comprising two or more electrodes co-operating with different heart regions}
- 1/3624 . . . . . {occurring in the atrium, i.e. atrial tachycardia}
- 1/3625 . . . . . {External stimulators}
- 1/3627 . . . . . {for treating a mechanical deficiency of the heart, e.g. congestive heart failure or cardiomyopathy}
- 1/3628 . . . . . {using sub-threshold or non-excitatory signals}
- 1/3629 . . . . . {in combination with non-electric therapy}

**WARNING**

Group [A61N 1/3629](#) is incomplete pending reclassification of documents from group [A61N 1/362](#).

Groups [A61N 1/3629](#) and [A61N 1/362](#) should be considered in order to perform a complete search.

- 1/365 . . . . . controlled by a physiological parameter, e.g. heart potential {(evoked response [A61N 1/371](#))}
- 1/36507 . . . . . {controlled by gradient or slope of the heart potential}
- 1/36514 . . . . . {controlled by a physiological quantity other than heart potential, e.g. blood pressure (controlled by two or more physical parameters [A61N 1/36585](#))}
- 1/36521 . . . . . {the parameter being derived from measurement of an electrical impedance}
- 1/36528 . . . . . {the parameter being measured by means of ultrasound}
- 1/36535 . . . . . {controlled by body position or posture}
- 1/36542 . . . . . {controlled by body motion, e.g. acceleration}
- 1/3655 . . . . . {controlled by body or blood temperature}
- 1/36557 . . . . . {controlled by chemical substances in blood}
- 1/36564 . . . . . {controlled by blood pressure}
- 1/36571 . . . . . {controlled by blood flow rate, e.g. blood velocity or cardiac output}
- 1/36578 . . . . . {controlled by mechanical motion of the heart wall, e.g. measured by an accelerometer or microphone}
- 1/36585 . . . . . {controlled by two or more physical parameters}
- 1/36592 . . . . . {controlled by the heart rate variability}
- 1/368 . . . . . comprising more than one electrode co-operating with different heart regions {([A61N 1/3622](#), [A61N 1/3627](#) take precedence)}
- 1/3682 . . . . . {with a variable atrioventricular delay}

- 1/3684 . . . . . {for stimulating the heart at multiple sites of the ventricle or the atrium}

**WARNING**

Group [A61N 1/3684](#) is impacted by reclassification into groups [A61N 1/36842](#) and [A61N 1/36843](#).

Groups [A61N 1/3684](#), [A61N 1/36842](#) and [A61N 1/36843](#) should be considered in order to perform a complete search.

- 1/36842 . . . . . {Multi-site stimulation in the same chamber}

**WARNING**

Group [A61N 1/36842](#) is incomplete pending reclassification of documents from group [A61N 1/3684](#).

Groups [A61N 1/36842](#) and [A61N 1/3684](#) should be considered in order to perform a complete search.

- 1/36843 . . . . . {Bi-ventricular stimulation}

**WARNING**

Group [A61N 1/36843](#) is incomplete pending reclassification of documents from group [A61N 1/3684](#).

Groups [A61N 1/36843](#) and [A61N 1/3684](#) should be considered in order to perform a complete search.

- 1/3686 . . . . . {configured for selecting the electrode configuration on a lead ([A61N 1/3688](#) takes precedence)}
- 1/3688 . . . . . {configured for switching the pacing mode, e.g. from AAI to DDD}
- 1/37 . . . . . Monitoring; Protecting
- 1/3702 . . . . . {Physiological parameters ([A61N 1/365](#) takes precedence; evoked response [A61N 1/371](#))}
- 1/3704 . . . . . {Circuits specially adapted therefor, e.g. for sensitivity control}
- 1/3706 . . . . . {Pacemaker parameters (stimulation threshold [A61N 1/371](#))}
- 1/3708 . . . . . {for power depletion}
- 1/371 . . . . . {Capture, i.e. successful stimulation}
- 1/3712 . . . . . {Auto-capture, i.e. automatic adjustment of the stimulation threshold}
- 1/3714 . . . . . {Atrial capture}
- 1/3716 . . . . . {with reduction of residual polarisation effects}
- 1/3718 . . . . . {Monitoring of or protection against external electromagnetic fields or currents}
- 1/372 . . . . . Arrangements in connection with the implantation of stimulators
- 1/37205 . . . . . {Microstimulators, e.g. implantable through a cannula}

1/37211 . . . . .	{Means for communicating with stimulators}	1/375 . . . . .	Constructional arrangements, e.g. casings
1/37217 . . . . .	{characterised by the communication link, e.g. acoustic or tactile}		<b><u>WARNING</u></b>
1/37223 . . . . .	{Circuits for electromagnetic coupling}		Group <a href="#">A61N 1/375</a> is impacted by reclassification into groups <a href="#">A61N 1/37512</a> , <a href="#">A61N 1/37514</a> , <a href="#">A61N 1/37516</a> and <a href="#">A61N 1/37518</a> .
1/37229 . . . . .	{Shape or location of the implanted or external antenna}		All groups listed in this Warning should be considered in order to perform a complete search.
1/37235 . . . . .	{Aspects of the external programmer}		
1/37241 . . . . .	{providing test stimulations}	1/37512 . . . . .	{Pacemakers}
1/37247 . . . . .	{User interfaces, e.g. input or presentation means}		<b><u>WARNING</u></b>
1/37252 . . . . .	{Details of algorithms or data aspects of communication system, e.g. handshaking, transmitting specific data or segmenting data}		Group <a href="#">A61N 1/37512</a> is incomplete pending reclassification of documents from group <a href="#">A61N 1/375</a> .
	<b><u>WARNING</u></b>		Groups <a href="#">A61N 1/37512</a> and <a href="#">A61N 1/375</a> should be considered in order to perform a complete search.
	Group <a href="#">A61N 1/37252</a> is impacted by reclassification into group <a href="#">A61N 1/37254</a> .		
	Groups <a href="#">A61N 1/37252</a> and <a href="#">A61N 1/37254</a> should be considered in order to perform a complete search.	1/37514 . . . . .	{Brain implants}
1/37254 . . . . .	{Pacemaker or defibrillator security, e.g. to prevent or inhibit programming alterations by hackers or unauthorised individuals}		<b><u>WARNING</u></b>
	<b><u>WARNING</u></b>		Group <a href="#">A61N 1/37514</a> is incomplete pending reclassification of documents from group <a href="#">A61N 1/375</a> .
	Group <a href="#">A61N 1/37254</a> is incomplete pending reclassification of documents from group <a href="#">A61N 1/37252</a> .		Groups <a href="#">A61N 1/37514</a> and <a href="#">A61N 1/375</a> should be considered in order to perform a complete search.
	Groups <a href="#">A61N 1/37254</a> and <a href="#">A61N 1/37252</a> should be considered in order to perform a complete search.	1/37516 . . . . .	{Intravascular implants}
			<b><u>WARNING</u></b>
1/37258 . . . . .	{Alerting the patient}		Group <a href="#">A61N 1/37516</a> is incomplete pending reclassification of documents from group <a href="#">A61N 1/375</a> .
1/37264 . . . . .	{Changing the program; Upgrading firmware}		Groups <a href="#">A61N 1/37516</a> and <a href="#">A61N 1/375</a> should be considered in order to perform a complete search.
1/3727 . . . . .	{characterised by the modulation technique}	1/37518 . . . . .	{Anchoring of the implants, e.g. fixation}
1/37276 . . . . .	{characterised by means for reducing power consumption during telemetry}		<b><u>WARNING</u></b>
1/37282 . . . . .	{characterised by communication with experts in remote locations using a network}		Group <a href="#">A61N 1/37518</a> is incomplete pending reclassification of documents from group <a href="#">A61N 1/375</a> .
1/37288 . . . . .	{Communication to several implantable medical devices within one patient}		Groups <a href="#">A61N 1/37518</a> and <a href="#">A61N 1/375</a> should be considered in order to perform a complete search.
2001/37294 . . . . .	{Means for testing medical devices within the package prior to implantation}	1/3752 . . . . .	{Details of casing-lead connections}
		1/3754 . . . . .	{Feedthroughs}
		1/3756 . . . . .	{Casings with electrodes thereon, e.g. leadless stimulators}
		1/3758 . . . . .	{Packaging of the components within the casing}
		1/378 . . . . .	Electrical supply
		1/3782 . . . . .	{producing a voltage above the power source level}
		1/3785 . . . . .	{generated by biological activity or substance, e.g. body movement}
		1/3787 . . . . .	{from an external energy source}
		1/38 . . . . .	for producing shock effects

- 1/385 . . . . {Devices for inducing an abnormal cardiac function, e.g. fibrillation}
- 1/39 . . . . Heart defibrillators
- WARNING**
- Group [A61N 1/39](#) is impacted by reclassification into groups [A61N 1/3904](#), [A61N 1/39044](#) and [A61N 1/39046](#).
- All groups listed in this Warning should be considered in order to perform a complete search.
- 1/3904 . . . . {External heart defibrillators [EHD]}
- WARNING**
- Group [A61N 1/3904](#) is incomplete pending reclassification of documents from group [A61N 1/39](#).
- Groups [A61N 1/3904](#) and [A61N 1/39](#) should be considered in order to perform a complete search.
- 1/39044 . . . . {in combination with cardiopulmonary resuscitation [CPR] therapy}
- WARNING**
- Group [A61N 1/39044](#) is incomplete pending reclassification of documents from group [A61N 1/39](#).
- Groups [A61N 1/39044](#) and [A61N 1/39](#) should be considered in order to perform a complete search.
- 1/39046 . . . . {User protection from shock}
- WARNING**
- Group [A61N 1/39046](#) is incomplete pending reclassification of documents from group [A61N 1/39](#).
- Groups [A61N 1/39046](#) and [A61N 1/39](#) should be considered in order to perform a complete search.
- 1/3906 . . . . {characterised by the form of the shockwave}
- 1/3912 . . . . {Output circuitry therefor, e.g. switches}
- 1/3918 . . . . {characterised by shock pathway, e.g. by electrode configuration}
- 1/3925 . . . . {Monitoring; Protecting}
- 1/3931 . . . . {Protecting, e.g. back-up systems}
- 1/3937 . . . . {Monitoring output parameters}
- 1/3943 . . . . {for threshold determination}
- 1/395 . . . . {for treating atrial fibrillation}
- 1/3956 . . . . {Implantable devices for applying electric shocks to the heart, e.g. for cardioversion}

- 1/3962 . . . . {in combination with another heart therapy}
- WARNING**
- Group [A61N 1/3962](#) is impacted by reclassification into groups [A61N 1/39622](#) and [A61N 1/39624](#).
- Groups [A61N 1/3962](#), [A61N 1/39622](#) and [A61N 1/39624](#) should be considered in order to perform a complete search.
- 1/39622 . . . . {Pacing therapy}
- WARNING**
- Group [A61N 1/39622](#) is incomplete pending reclassification of documents from group [A61N 1/3962](#).
- Groups [A61N 1/39622](#) and [A61N 1/3962](#) should be considered in order to perform a complete search.
- 1/39624 . . . . {Pain reduction therapy}
- WARNING**
- Group [A61N 1/39624](#) is incomplete pending reclassification of documents from group [A61N 1/3962](#).
- Groups [A61N 1/39624](#) and [A61N 1/3962](#) should be considered in order to perform a complete search.
- 1/3968 . . . . {Constructional arrangements, e.g. casings ([A61N 1/375](#) takes precedence)}
- 1/3975 . . . . {Power supply ([A61N 1/378](#) takes precedence)}
- 1/3981 . . . . {High voltage charging circuitry}
- 1/3987 . . . . {characterised by the timing or triggering of the shock}
- 1/3993 . . . . {User interfaces for automatic external defibrillators}
- 1/40 . . . . Applying electric fields by inductive or capacitive coupling ([microwave apparatus A61N 5/00](#));  
{Applying radio-frequency signals}
- 1/403 . . . . {for thermotherapy, e.g. hyperthermia}
- 1/406 . . . . {using implantable thermoseeds or injected particles for localized hyperthermia (preparations of seeds and particles [A61K 41/0052](#))}
- 1/44 . . . . Applying ionised fluids {(ion generators [H01J 37/00](#))}
- 1/445 . . . . {Hydro-electric baths}
- 2/00 Magnetotherapy**
- 2/002 . . . . {in combination with another treatment}
- 2/004 . . . . {specially adapted for a specific therapy}
- 2/006 . . . . {for magnetic stimulation of nerve tissue}
- 2/008 . . . . {for pain treatment or analgesia}
- 2/02 . . . . using magnetic fields produced by coils, including single turn loops or electromagnets ([A61N 2/12](#) takes precedence)

2/06	. using magnetic fields produced by permanent magnets ( <a href="#">A61N 2/12</a> takes precedence)	5/0625	. . . {Warming the body, e.g. hyperthermia treatment (heating by RF <a href="#">A61N 1/403</a> ; heating by microwave <a href="#">A61N 5/025</a> ; heating by other appliances <a href="#">A61F 7/00</a> ; hot air bath <a href="#">A61H 33/06</a> )}
2/12	. using variable magnetic fields obtained by mechanical movement	2005/0626	. . {Monitoring, verifying, controlling systems and methods}
<b>5/00</b>	<b>Radiation therapy</b> (ultrasound therapy <a href="#">A61N 7/00</a> ; devices or apparatus applicable to both therapy and diagnosis <a href="#">A61B 6/00</a> )	2005/0627	. . . {Dose monitoring systems and methods}
2005/002	. {Cooling systems}	2005/0628	. . . . {including a radiation sensor}
2005/005	. . {for cooling the radiator}	2005/0629	. . . {Sequential activation of light sources}
2005/007	. . {for cooling the patient}	2005/063	. . {comprising light transmitting means, e.g. optical fibres}
5/01	. Devices for producing movement of radiation source during therapy {( <a href="#">A61N 5/1077</a> takes precedence)}	2005/0631	. . . {using crystals}
5/02	. using microwaves	2005/0632	. . {Constructional aspects of the apparatus}
5/022	. . {Apparatus adapted for a specific treatment}	2005/0633	. . . {Arrangements for lifting or hinging the frame which supports the light sources}
5/025	. . . {Warming the body, e.g. hyperthermia treatment (heating by RF <a href="#">A61N 1/403</a> ; heating by infrared radiation <a href="#">A61N 5/0625</a> ; heating by other appliances <a href="#">A61F 7/00</a> ; hot air bath <a href="#">A61H 33/06</a> )}	2005/0634	. . . {Mechanisms that allow a space saving storage of the apparatus}
2005/027	. . {using a phased array}	2005/0635	. . {characterised by the body area to be irradiated}
5/04	. . Radiators for near-field treatment	2005/0636	. . . {Irradiating the whole body}
5/045	. . . {specially adapted for treatment inside the body ( <a href="#">A61B 18/1815</a> takes precedence)}	2005/0637	. . . . {in a horizontal position}
5/06	. using light	2005/0638	. . . . . {with a specially adapted support surface}
5/0601	. . {Apparatus for use inside the body (illuminating body cavities <a href="#">A61B 1/06</a> ; diagnosis by radiation applied to body cavities <a href="#">A61B 6/4057</a> , <a href="#">A61B 6/145</a> ; devices for heating or cooling body cavities <a href="#">A61F 7/12</a> ; X-ray tubes having a small cross-section to facilitate introduction into small cavities <a href="#">H01J 35/32</a> )}	2005/0639	. . . . . {with additional sources directed at, e.g. the face or the feet}
2005/0602	. . . {for treatment of blood vessels}	2005/064	. . . . {in a vertical position}
5/0603	. . . {for treatment of body cavities}	2005/0641	. . . . . {with rotation of the patient}
2005/0604	. . . . {Lungs and/or airways}	2005/0642	. . . {Irradiating part of the body at a certain distance}
2005/0605	. . . . {Ear}	2005/0643	. . . {Applicators, probes irradiating specific body areas in close proximity}
2005/0606	. . . . {Mouth}	2005/0644	. . . . {Handheld applicators}
2005/0607	. . . . {Nose}	2005/0645	. . . . {Applicators worn by the patient}
2005/0608	. . . . {Rectum}	2005/0647	. . . . . {the applicator adapted to be worn on the head}
2005/0609	. . . . {Stomach and/or esophagus}	2005/0648	. . . . . {the light being directed to the eyes}
2005/061	. . . . {Bladder and/or urethra}	2005/0649	. . . . {using suction to fix the applicator to the tissue}
2005/0611	. . . . {Vagina}	2005/065	. . {Light sources therefor}
2005/0612	. . . {using probes penetrating tissue; interstitial probes}	2005/0651	. . . {Diodes}
5/0613	. . {Apparatus adapted for a specific treatment}	2005/0652	. . . . {Arrays of diodes}
5/0614	. . . {Tanning}	2005/0653	. . . . {Organic light emitting diodes}
2005/0615	. . . . {using UV light sources having a specific spectrum}	2005/0654	. . . {Lamps}
5/0616	. . . {Skin treatment other than tanning}	2005/0655	. . . {Tubes}
5/0617	. . . . {Hair treatment}	2005/0656	. . . {Chemical light sources}
5/0618	. . . {Psychological treatment ( <a href="#">A61M 21/00</a> takes precedence)}	2005/0657	. . . {Natural light sources, e.g. captured sunlight}
5/0619	. . . {Acupuncture (acupuncture in general <a href="#">A61H 39/00</a> )}	2005/0658	. . {characterised by the wavelength of light used}
5/062	. . . {Photodynamic therapy, i.e. excitation of an agent}	2005/0659	. . . {infra-red}
5/0621	. . . {Hyperbilirubinemia, jaundice treatment}	2005/066	. . . . {far infrared}
5/0622	. . . {Optical stimulation for exciting neural tissue}	2005/0661	. . . {ultra-violet}
5/0624	. . . {for eliminating microbes, germs, bacteria on or in the body (sterilization by radiation <a href="#">A61L 2/08</a> , <a href="#">A61L 2/10</a> )}	2005/0662	. . . {Visible light}
		2005/0663	. . . . {Coloured light}
		2005/0664	. . {Details}
		2005/0665	. . . {Reflectors}
		2005/0666	. . . . {for redirecting light to the treatment area}
		2005/0667	. . . {Filters}
		2005/0668	. . . {Apparatus adapted for operation in a moist environment, e.g. bath or shower}
		2005/067	. . {using laser light}
		2005/073	. . {using polarised light}

- 5/10 . . . {X-ray therapy; Gamma-ray therapy; Particle-irradiation therapy ([A61N 5/01](#) takes precedence ; radiation diagnosis, e.g. combined with radiation therapy [A61B 6/00](#); irradiation devices in general [G21K 1/00](#); X-ray tubes, Lenard tubes [H01J 35/00](#); X-ray techniques, in particular circuits for feeding or controlling X-ray tubes, [H05G](#))}
- 5/1001 . . . {using radiation sources introduced into or applied onto the body; brachytherapy}
- 5/1002 . . . {Intraluminal radiation therapy (intraluminal catheters in general [A61M 25/00](#))}
- 2005/1003 . . . . {having means for centering a radioactive source within the lumen, e.g. balloons}
- 2005/1004 . . . . {having expandable radiation sources}
- 2005/1005 . . . . {with asymmetrical radiation pattern}
- 5/1007 . . . {Arrangements or means for the introduction of sources into the body (needle guides in general [A61B 17/3403](#); apparatus for implanting surgical devices [A61B 17/3468](#); devices for implanting seeds or pellets in general [A61M 37/0069](#))}
- 2005/1008 . . . . {Apparatus for temporary insertion of sources, e.g. afterloaders}
- 2005/1009 . . . . {Apparatus for loading seeds into magazines or needles}
- 2005/101 . . . . {Magazines or cartridges for seeds}
- 2005/1011 . . . . {Apparatus for permanent insertion of sources}
- 2005/1012 . . . . {Templates or grids for guiding the introduction of sources}
- 5/1014 . . . {Intracavitary radiation therapy}
- 5/1015 . . . . {Treatment of resected cavities created by surgery, e.g. lumpectomy}
- 5/1016 . . . . {Gynaecological radiation therapy}
- 5/1017 . . . . {Treatment of the eye, e.g. for "macular degeneration"}
- 2005/1018 . . . . {with multiple channels for guiding radioactive sources}
- 2005/1019 . . . {Sources therefor}
- 2005/1021 . . . . {Radioactive fluid}
- 2005/1022 . . . . {Generators, e.g. X-ray tubes}
- 2005/1023 . . . . {Means for creating a row of seeds, e.g. spacers}
- 2005/1024 . . . . {Seeds}
- 2005/1025 . . . . {Wires}
- 5/1027 . . . {Interstitial radiation therapy}
- 5/1028 . . . {using radiation sources applied onto the body}
- 5/1029 . . . . {Radioactive dressings ([dressings in general A61F](#), [A61L 15/00](#))}
- 5/103 . . . {Treatment planning systems}
- 5/1031 . . . {using a specific method of dose optimization}
- 2005/1032 . . . . {Genetic optimization methods}
- 2005/1034 . . . . {Monte Carlo type methods; particle tracking}
- 2005/1035 . . . . {Simulated annealing}
- 5/1036 . . . {Leaf sequencing algorithms}
- 5/1037 . . . {taking into account the movement of the target, e.g. 4D-image based planning}
- 5/1038 . . . {taking into account previously administered plans applied to the same patient, i.e. adaptive radiotherapy}
- 5/1039 . . . {using functional images, e.g. PET or MRI}
- 2005/1041 . . . {using a library of previously administered radiation treatment applied to other patients}
- 5/1042 . . . {with spatial modulation of the radiation beam within the treatment head}
- 5/1043 . . . . {Scanning the radiation beam, e.g. spot scanning or raster scanning}
- 5/1044 . . . . {with multiple repetitions of the scanning pattern}
- 5/1045 . . . . {using a multi-leaf collimator, e.g. for intensity modulated radiation therapy or IMRT}
- 5/1047 . . . . {with movement of the radiation head during application of radiation, e.g. for intensity modulated arc therapy or IMAT}
- 5/1048 . . . {Monitoring, verifying, controlling systems and methods}
- 5/1049 . . . {for verifying the position of the patient with respect to the radiation beam}
- 2005/105 . . . . {using a laser alignment system}
- 2005/1051 . . . . {using an active marker ([markers in general A61B 90/39](#))}
- 2005/1052 . . . . {using positron emission tomography [PET] single photon emission computer tomography [SPECT] imaging}
- 2005/1054 . . . . {using a portal imaging system}
- 2005/1055 . . . . {using magnetic resonance imaging [MRI]}
- 2005/1056 . . . . {by projecting a visible image of the treatment field}
- 2005/1057 . . . . {monitoring flexing of the patient support or the radiation treatment apparatus}
- 2005/1058 . . . . {using ultrasound imaging}
- 2005/1059 . . . . {using cameras imaging the patient}
- 2005/1061 . . . . {using an x-ray imaging system having a separate imaging source}
- 2005/1062 . . . . . {using virtual X-ray images, e.g. digitally reconstructed radiographs [DRR]}
- 2005/1063 . . . . {maintaining the position when the patient is moved from an imaging to a therapy system}
- 5/1064 . . . {for adjusting radiation treatment in response to monitoring}
- 5/1065 . . . . {Beam adjustment}
- 5/1067 . . . . . {in real time, i.e. during treatment}
- 5/1068 . . . . {Gating the beam as a function of a physiological signal}
- 5/1069 . . . . {Target adjustment, e.g. moving the patient support}
- 5/107 . . . . . {in real time, i.e. during treatment}
- 5/1071 . . . {for verifying the dose delivered by the treatment plan}
- 2005/1072 . . . . {taking into account movement of the target}
- 2005/1074 . . . {Details of the control system, e.g. user interfaces}
- 5/1075 . . . {for testing, calibrating, or quality assurance of the radiation treatment apparatus}
- 2005/1076 . . . . {using a dummy object placed in the radiation field, e.g. phantom}
- 5/1077 . . . {Beam delivery systems}
- 5/1078 . . . {Fixed beam systems}
- 5/1079 . . . {Sharing a beam by multiple treatment stations}
- 5/1081 . . . {Rotating beam systems with a specific mechanical construction, e.g. gantries}
- 5/1082 . . . . {having multiple beam rotation axes}
- 5/1083 . . . {Robot arm beam systems}
- 5/1084 . . . {for delivering multiple intersecting beams at the same time, e.g. gamma knives}

- 2005/1085 . . {characterised by the type of particles applied to the patient}
- 2005/1087 . . . {Ions; Protons}
- 2005/1088 . . . . {generated by laser radiation}
- 2005/1089 . . . {Electrons}
- 2005/109 . . . {Neutrons}
- 2005/1091 . . . {Kilovoltage or orthovoltage range photons}
- 2005/1092 . . {Details}
- 2005/1094 . . . {Shielding, protecting against radiation}
- 2005/1095 . . . {Elements inserted into the radiation path within the system, e.g. filters or wedges}
- 2005/1096 . . . {Elements inserted into the radiation path placed on the patient, e.g. bags, bolus, compensators}
- 2005/1097 . . . {Means for immobilizing the patient}
- 2005/1098 . . . {Enhancing the effect of the particle by an injected agent or implanted device}

**7/00**     **Ultrasound therapy** ([lithotripsy A61B 17/22](#), [A61B 17/225](#); [massage using supersonic vibration A61H 23/00](#) {; using ultrasound for introducing media into the body [A61M 37/0092](#)})

- 2007/0004 . {Applications of ultrasound therapy}
- 2007/0008 . . {Destruction of fat cells}
- 2007/0013 . . {Fracture healing}
- 2007/0017 . . {Wound healing}
- 2007/0021 . . {Neural system treatment}
- 2007/0026 . . . {Stimulation of nerve tissue}
- 2007/003 . . . {Destruction of nerve tissue}
- 2007/0034 . . {Skin treatment}
- 2007/0039 . {using microbubbles}
- 2007/0043 . {intra-cavitary}
- 2007/0047 . {interstitial}
- 2007/0052 . {using the same transducer for therapy and imaging}
- 2007/0056 . {Beam shaping elements}
- 2007/006 . . {Lenses}
- 2007/0065 . . {Concave transducers}
- 2007/0069 . . {Reflectors}
- 2007/0073 . {using multiple frequencies}
- 2007/0078 . {with multiple treatment transducers}
- 2007/0082 . {Scanning transducers}
- 2007/0086 . {Beam steering}
- 2007/0091 . . {with moving parts, e.g. transducers, lenses, reflectors}
- 2007/0095 . . {by modifying an excitation signal}
- 7/02 . Localised ultrasound hyperthermia {([hyperthermia in general A61F 7/00](#))}
- 7/022 . . {intracavitary}
- 2007/025 . . {interstitial}
- 2007/027 . . {with multiple foci created simultaneously}