## 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 used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:
- A61N 1/34 covered by A61N 1/36021, A61N 1/36071
- A61N 2/04 covered by A61N 2/02
- A61N 5/067 covered by A61N 5/06
- A61N 5/08 covered by A61N 5/06
- A61N 2/08 covered by A61N 2/06
- A61N 2/10 covered by A61N 2/08
- A61N 5/073 covered by A61N 5/06, A61N 2005/073

### 1/00  Electrotherapy; Circuits therefor (A61N 2/00 takes precedence; irradiation apparatus A61N 5/00)

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| 1/046 | {Specially adapted for shock therapy, e.g. defibrillation} |
| 1/0464 | {Specially adapted for promoting tissue growth} |
| 1/0468 | {Specially adapted for promoting wound healing} |
| 1/0472 | {Structure-related aspects} |
| 1/0476 | {Array electrodes (including any electrode arrangement with more than one electrode for at least one of the polarities)} |
| 1/048 | {Electrodes characterised by a specific connection between lead and electrode} |
| 1/0484 | {Garment electrodes worn by the patient} |
| 1/0488 | {Details about the lead} |
| 1/0492 | {Patch electrodes (A61N 1/0412, A61N 1/0428 take precedence)} |
| 1/0496 | {characterised by using specific chemical compositions, e.g. hydrogel compositions, adhesives} |
| 1/05 | {for implantation or insertion into the body, e.g. heart electrode (A61N 1/06 takes precedence)} |
| 1/0502 | {Skin piercing electrodes} |
| 1/0504 | {Subcutaneous electrodes} |
| 1/0507 | {Electrodes for the digestive system} |
| 1/0509 | {Stomach and intestinal electrodes} |
| 1/0512 | {Anal electrodes} |
| 1/0514 | {Electrodes for the urinary tract} |
A61N

1/0517 . . . . [Esophageal electrodes]
1/0519 . . . . [Endotracheal electrodes]
1/0521 . . . . [Genital electrodes]
1/0524 . . . . [Vaginal electrodes]
1/0526 . . . . [Head electrodes (A61N 1/0551 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 A61N 1/3603; for implantable neurostimulators A61N 1/36128; for heart stimulators A61N 1/37; for defibrillators A61N 1/3925)]

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.

1/086 . . . . [Magnetic resonance imaging [MRI] compatible leads]
1/10 . . Applying static electricity (applying ionised gases or vapours A61N 1/44)
1/14 . . Leading-off electric charges, e.g. by earthing (carrying-off electrostatic charges, in general H05F 3/00)
1/16 . . Screening or neutralising undesirable influences from [or using.] atmospheric or terrestrial radiation or fields ((using atmospheric electricity or earth currents H05F 3/00)
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 A61H; Combs)
1/28 . . . Apparatus for applying thermolectric 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 A61N 1/0428)]
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 A61N 1/40; microwave apparatus A61N 5/02)
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 A61N 1/0428)]
1/326 . . . . [for promoting growth of cells, e.g. bone cells]
1/327 . . . . [for enhancing the absorption properties of tissue, e.g. by electroretoration]
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 1/3602. Groups A61N 1/36 and A61N 1/3602 should be considered in order to perform a complete search.
A61N

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 1/36038, A61N 1/36039 and A61N 1/36036 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 1/3614 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 1/3606 and A61N 1/36062 should be considered in order to perform a complete search.

CPC - 2017.08
Pain

Headache or migraine

Inducing or controlling sleep or relaxation (non-implantable stimulator A61M 21/00)

Cognitive or psychiatric applications, e.g. dementia or Alzheimer's disease

Eating disorders or obesity

Addiction or withdrawal from substance abuse such as alcohol or drugs

Mental training

Mood disorders, e.g. depression, anxiety or panic disorder

Phantom sensations, e.g. tinnitus

Neuro-rehabilitation; Repair or reorganisation of neural tissue, e.g. after stroke

Sexual dysfunction (stimulating genital organs A61N 1/36007)

Respiration control (stimulating respiratory organs A61N 1/3601)

Cardiac control, e.g. by vagal stimulation (stimulating the heart A61N 1/362)

for improving safety

specified by the stimulation parameters

Intensity

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.

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.

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.

Sub-threshold or non-excitatory signals (non-excitatory signals to the heart A61N 1/3628)

Timing, e.g. stimulation onset

Frequency

Pulse width or duty cycle

Burst or pulse train parameters

Direction of the electrical field, e.g. with sleeve around stimulating electrode

Selection of the electrode configuration

using modulation techniques

[Amplitude modulation]

[Frequency modulation]

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.

for treating or preventing abnormally high heart rate
A6L

1/3624 {comprising two or more electrodes co-
operating with different heart regions}

1/3625 {occurring in the atrium, i.e. atrial
tachycardia}

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 A6L 1/3629 is incomplete pending reclassification of documents from group A6L 1/362.
Groups A6L 1/3629 and A6L 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
A6L 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 A6L 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}

1/3682 {with a variable atrioventricular
delay}

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

WARNING

Group A6L 1/3684 is impacted by reclassification into groups A6L 1/36842 and A6L 1/36843.
Groups A6L 1/3684, A6L 1/36842 and A6L 1/36843 should be considered in order to perform a complete search.

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

WARNING

Group A6L 1/36842 is incomplete pending reclassification of documents from group A6L 1/3684.
Groups A6L 1/36842 and A6L 1/3684 should be considered in order to perform a complete search.

1/36843 {Bi-ventricular stimulation}

WARNING

Group A6L 1/36843 is incomplete pending reclassification of documents from group A6L 1/3684.
Groups A6L 1/36843 and A6L 1/3684 should be considered in order to perform a complete search.

1/3686 {configured for selecting the electrode
configuration on a lead (A6L 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 (A6L 1/365
takes precedence; evoked response
A6L 1/371) }

1/3704 {Circuits specially adapted therefor,
e.g. for sensitivity control}

1/3706 {Pacemaker parameters (stimulation
threshold A6L 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}
Means for communicating with stimulators
(characterised by the communication link, e.g. acoustic or tactile)
Circuits for electromagnetic coupling
Shape or location of the implanted or external antenna
Aspects of the external programmer
(providing test stimulations)
User interfaces, e.g. input or presentation means
Details of algorithms or data aspects of communication system, e.g. handshaking, transmitting specific data or segmenting data

WARNING
Group A61N 1/37252 is impacted by reclassification into group A61N 1/37254.
Groups A61N 1/37252 and A61N 1/37254 should be considered in order to perform a complete search.

Pacemaker or defibrillator security, e.g. to prevent or inhibit programming alterations by hackers or unauthorised individuals

WARNING
Group A61N 1/37254 is incomplete pending reclassification of documents from group A61N 1/375.
Groups A61N 1/37512 and A61N 1/375 should be considered in order to perform a complete search.

Brain implants

WARNING
Group A61N 1/37514 is incomplete pending reclassification of documents from group A61N 1/375.
Groups A61N 1/37514 and A61N 1/375 should be considered in order to perform a complete search.

Intravascular implants

WARNING
Group A61N 1/37516 is incomplete pending reclassification of documents from group A61N 1/375.
Groups A61N 1/37516 and A61N 1/375 should be considered in order to perform a complete search.

Anchoring of the implants, e.g. fixation

WARNING
Group A61N 1/37518 is incomplete pending reclassification of documents from group A61N 1/375.
Groups A61N 1/37518 and A61N 1/375 should be considered in order to perform a complete search.

Details of casing-lead connections
Feedthroughs
Casings with electrodes thereon, e.g. leadless stimulators
Packaging of the components within the casing
Electrical supply
Producing a voltage above the power source level
Generated by biological activity or substance, e.g. body movement
From an external energy source
for producing shock effects
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.

[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.

{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.

{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.

{characterised by the form of the shockwave}

{Output circuitry therefor, e.g. switches}

{characterised by shock pathway, e.g. by electrode configuration}

{Monitoring; Protecting}

{Protecting, e.g. back-up systems}

{Monitoring output parameters}

{for threshold determination}

{for treating atrial fibrillation}

{Implantable devices for applying electric shocks to the heart, e.g. for cardioversion}

{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.

[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.

[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.

{Constructional arrangements, e.g. casings (A61N 1/375 takes precedence)}

{Power supply (A61N 1/378 takes precedence)}

{High voltage charging circuitry}

{characterised by the timing or triggering of the shock}

{User interfaces for automatic external defibrillators}

Applying electric fields by inductive or capacitive coupling (microwave apparatus A61N 5/00; Applying radio-frequency signals)

{for thermotherapy, e.g. hyperthermia}

{using implantable thermoseeds or injected particles for localized hyperthermia (preparations of seeds and particles A61K 41/0052)}

Applying ionised fluids (ion generators H01J 37/00)

Hydro-electric baths

Magnetotherapy

{in combination with another treatment}

{specially adapted for a specific therapy}

{for magnetic stimulation of nerve tissue}

{for pain treatment or analgesia}

using magnetic fields produced by coils, including single turn loops or electromagnets (A61N 2/12 takes precedence)
A61N

2/06 . using magnetic fields produced by permanent magnets (A61N 2/12 takes precedence)
2/12 . using variable magnetic fields obtained by mechanical movement

5/00 Radiation therapy (ultrasound therapy A61N 7/00; devices or apparatus applicable to both therapy and diagnosis A61B 6/00)

2005/002 . [Cooling systems]
2005/005 . [for cooling the radiator]
2005/007 . [for cooling the patient]

5/01 . Devices for producing movement of radiation source during therapy (A61N 5/1077 takes precedence)

5/02 . using microwaves
5/022 . [Apparatus adapted for a specific treatment]
5/025 . [Warming the body, e.g. hyperthermia treatment (heating by RF A61N 1/403; heating by infrared radiation A61N 5/0625; heating by other appliances A61F 7/00; hot air bath A61H 33/06)]

2005/007 . [using a phased array]
5/04 . Radiators for near-field treatment
5/045 . [specially adapted for treatment inside the body (A61B 18/1815 takes precedence)]
5/06 . using light
5/0601 . [Apparatus for use inside the body (illuminating body cavities A61B 1/06; diagnosis by radiation applied to body cavities A61B 6/4057; A61B 6/145; devices for heating or cooling body cavities A61F 7/12; X-ray tubes having a small cross-section to facilitate introduction into small cavities H01J 35/32)]

2005/002 . [for treatment of blood vessels]
5/003 . [for treatment of body cavities]
5/006 . [Ear]
5/0060 . [Mouth]
5/00607 . [Nose]
5/00608 . [Rectum]
5/00609 . [Stomach and/or esophagus]
5/0061 . [Bladder and/or urethra]
5/00611 . [Vagina]
5/00612 . [using probes penetrating tissue; interstitial probes]
5/00613 . [Apparatus adapted for a specific treatment]
5/00614 . [Tanning]

2005/015 . [using UV light sources having a specific spectrum]
5/006 . [Skin treatment other than tanning]
5/00616 . [Hair treatment]
5/00617 . [Psychological treatment (A61M 21/00 takes precedence)]
5/00619 . [Acupuncture (acupuncture in general A61H 39/00)]
5/0062 . [Photodynamic therapy, i.e. excitation of an agent]
5/00621 . [Hyperbilirubinemia, jaundice treatment]
5/00622 . [Optical stimulation for exciting neural tissue]
5/00624 . [for eliminating microbes, germs, bacteria on or in the body (sterilization by radiation A61L 2/08, A61L 2/10)]

5/00625 . [Warming the body, e.g. hyperthermia treatment (heating by RF A61N 1/403; heating by microwave A61N 5/025; heating by other appliances A61F 7/00; hot air bath A61H 33/06)]

2005/0026 . [Monitoring, verifying, controlling systems and methods]
2005/0027 . [Dose monitoring systems and methods]
2005/0028 . [including a radiation sensor]
2005/0029 . [Sequential activation of light sources]
2005/0063 . [comprising light transmitting means, e.g. optical fibres]
2005/00631 . [using crystals]
2005/00632 . [Constructional aspects of the apparatus]
2005/00633 . [Arrangements for lifting or hinging the frame which supports the light sources]
2005/00634 . [Mechanisms that allow a space saving storage of the apparatus]
2005/00635 . [characterised by the body area to be irradiated]
2005/00636 . [Irradiating the whole body]
2005/00637 . [in a horizontal position]
2005/00638 . [with a specially adapted support surface]
2005/00639 . [with additional sources directed at, e.g. the face or the feet]
2005/0064 . [in a vertical position]
2005/00641 . [with rotation of the patient]
2005/00642 . [Irradiating part of the body at a certain distance]
2005/00643 . [Applicators, probes irradiating specific body areas in close proximity]
2005/00644 . [Handheld applicators]
2005/00645 . [Applicators worn by the patient]
2005/00647 . [the applicator adapted to be worn on the head]
2005/00648 . [the light being directed to the eyes]
2005/00649 . [using suction to fix the applicator to the tissue]
2005/0065 . [Light sources therefor]
2005/00651 . [Diodes]
2005/00652 . [Arrays of diodes]
2005/00653 . [Organic light emitting diodes]
2005/00654 . [Lamps]
2005/00655 . [Tubes]
2005/00656 . [Chemical light sources]
2005/00657 . [Natural light sources, e.g. captured sunlight]
2005/00658 . [characterised by the wavelength of light used]
2005/00659 . [infra-red]
2005/0066 . [far infrared]
2005/00661 . [ultra-violet]
2005/00662 . [Visible light]
2005/00663 . [Coloured light]
2005/00664 . [Details]
2005/00665 . [Reflectors]
2005/00666 . [for redirecting light to the treatment area]
2005/00667 . [Filters]
2005/00668 . [Apparatus adapted for operation in a moist environment, e.g. bath or shower]
2005/0067 . [using laser light]
2005/0073 . [using polarised light]
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)

[using radiation sources introduced into or applied onto the body; brachytherapy]

{Intraluminal radiation therapy (intraluminal catheters in general A61M 25/000)}

[using means for centering a radioactive source within the lumen, e.g. balloons]

[Having expandable radiation sources]

{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)}

[Apparatus for temporary insertion of sources, e.g. afterloaders]

{Apparatus for loading seeds into magazines or needles}

{Magazines or cartridges for seeds]

{Apparatus for permanent insertion of sources]

{Templates or grids for guiding the introduction of sources]

{Intracavitary radiation therapy]

{Treatment of resected cavities created by surgery, e.g. lumpectomy]

{Gynaecological radiation therapy]

{Treatment of the eye, e.g. for "macular degeneration"

(with multiple channels for guiding radioactive sources]

{Sources therefor]

{Radioactive fluid]

{Generators, e.g. X-ray tubes]

{Means for creating a row of seeds, e.g. spacers]

{Seeds]

{Wires]

{Interstitial radiation therapy]

{using radiation sources applied onto the body]

{Radioactive dressings (dressings in general A61F, A61L 15/000)}

{Treatment planning systems]

{using a specific method of dose optimization]

{Genetic optimization methods]

{Monte Carlo type methods; particle tracking]

{Simulated annealing]

{Leaf sequencing algorithms]

{taking into account the movement of the target, e.g. 4D-image based planning]

{taking into account previously administered plans applied to the same patient, i.e. adaptive radiotherapy]

{using functional images, e.g. PET or MRI]

{using a library of previously administered radiation treatment applied to other patients]

{with spatial modulation of the radiation beam within the treatment head]

{Scanning the radiation beam, e.g. spot scanning or raster scanning]

{with multiple repetitions of the scanning pattern]

{using a multi-leaf collimator, e.g. for intensity modulated radiation therapy or IMRT]

{with movement of the radiation head during application of radiation, e.g. for intensity modulated arc therapy or IMAT]

{Monitoring, verifying, controlling systems and methods]

{for verifying the position of the patient with respect to the radiation beam]

{for using a laser alignment system]

{for using an active marker (markers in general A61B 90/00)]

{using positron emission tomography [PET] single photon emission computer tomography [SPECT] imaging]

{using a portal imaging system]

{using magnetic resonance imaging [MRI]}

{by projecting a visible image of the treatment field]

{monitoring flexing of the patient support or the radiation treatment apparatus]

{using ultrasound imaging]

{using cameras imaging the patient]

{using an X-ray imaging system having a separate image source]

{using virtual X-ray images, e.g. digitally reconstructed radiographs [DRR]}

{maintaining the position when the patient is moved from an imaging to a therapy system]

{for adjusting radiation treatment in response to monitoring]

{Beam adjustment]

{in real time, i.e. during treatment]

{Gating the beam as a function of a physiological signal]

{Target adjustment, e.g. moving the patient support]

{in real time, i.e. during treatment]

{for verifying the dose delivered by the treatment plan]

{taking into account movement of the target]

{Details of the control system, e.g. user interfaces]

{for testing, calibrating, or quality assurance of the radiation treatment apparatus]

{using a dummy object placed in the radiation field, e.g. phantom]

{Beam delivery systems]

{Fixed beam systems]

{Sharing a beam by multiple treatment stations]

{Rotating beam systems with a specific mechanical construction, e.g. gantries]

{having multiple beam rotation axes]

{Robot arm beam systems]

{for delivering multiple intersecting beams at the same time, e.g. gamma knives]
characterised by the type of particles applied to
the patient

Ions; Protons

generated by laser radiation

Electrons

Neutrons

Kilovoltage or orthovoltage range photons

Details

Shielding, protecting against radiation

Elements inserted into the radiation path
within the system, e.g. filters or wedges

Elements inserted into the radiation path
placed on the patient, e.g. bags, bolus,
compensators

Means for immobilizing the patient

Enhancing the effect of the particle by an
injected agent or implanted device

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)

Destruction of fat cells

Fracture healing

Wound healing

Neural system treatment

Stimulation of nerve tissue

Destruction of nerve tissue

Skin treatment

using microbubbles

intra-cavitary

interstitial

using the same transducer for therapy and
imaging

Beam shaping elements

Lenses

Concave transducers

Reflectors

using multiple frequencies

with multiple treatment transducers

Scanning transducers

Beam steering

with moving parts, e.g. transducers, lenses,
reflectors

by modifying an excitation signal

Localised ultrasound hyperthermia (hyperthermia
in general A61F 7/00)

intracavitary

interstitial

with multiple foci created simultaneously