

## 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](#); infrared radiators for heating [H05B](#))

### Definition statement

*This place covers:*

Specially adapted apparatus, instruments, devices, or processes for the following types of therapy:

- electrotherapy, e.g. iontophoresis;
- magnetotherapy;
- radiation therapy;
- ultrasound therapy.

Components having specialized structural features that limit their use to the apparatus, instruments, or devices for the types of therapy appropriate for this subclass.

### Relationships with other classification places

Several subclasses provide for subject matter that is used for therapy. The relationship between these subclasses in regard to the type of therapy covered by each is as follows:

Subclass [A61N](#) provides for medical treatment-type therapy by apparatus or methods utilizing forms of energy other than direct mechanical energy when they are not used for surgical purposes and they are intended to either

- destroy, control, or advance the recovery of sick or abnormal cells within body tissue while minimizing undesirable destruction of adjoining healthy cells, or
- treat other types of abnormal conditions of the body (e.g., disease, impaired organ, injured limb).

In particular, subclass [A61N](#) covers implanted devices, when the implanted device is not a replacement or supplementation of an actual portion of the organ or part, utilizing forms of energy other than direct mechanical energy to stimulate organs or body parts in a manner that facilitates, regulates, or improves their normal functioning.

Subclass [A61H](#) provides for massage and physical-type therapy apparatus or methods for the treatment of disease or disability (i.e., an abnormal condition of the body) by utilization of direct mechanical energy. The apparatus or methods appropriate for this subclass do not surgically alter any portion of the bodies during treatment. Usually, the massage and therapy apparatus and methods of this subclass are intended to facilitate the healing of diseases, reduce the impact of injuries, or beneficially influence the condition of disabled body parts by physically moving a part of a body (e.g., devices for exercising a passive body member) solely by direct physical contact with, or stimulation of, external surfaces of the body or naturally occurring cavities in the body. However, stimulation of internal organs or body parts, such as artificial respiration and stimulation of the heart, when it is done by direct mechanical energy is also considered proper for this subclass.

Subclass [A61K](#) and Subclass [A61P](#) provide for drug-type therapy using chemical compounds or medicinal preparations specially adapted for use in healing, benefiting, or destroying abnormal conditions of the body (e.g., diseases, birth defects) and the specific therapeutic activities that the chemical compounds and medicinal preparations are used for.

Subclass [A61B](#) provides for surgery and surgical-type therapy that alters or repairs organs and body parts. It also provides for any surgical or diagnostic apparatus or methods that would otherwise be proper for subclass [A61H](#) or [A61N](#) when the apparatus or methods are used for both purposes

or combined together. In particular, subclass [A61B](#) provides for surgical instruments, devices, or methods for transferring non-mechanical forms of energy to or from the body (e.g., electromagnetic radiation surgery) to alter or repair it.

## References

### Limiting references

*This place does not cover:*

Apparatus for diagnosis or surgery combined with, or applicable also as, therapy apparatus	<a href="#">A61B</a>
Apparatus for radiation diagnosis	<a href="#">A61B 6/00</a>
Surgical instruments, devices or methods for transferring non-mechanical forms of energy to or from the body (e.g., radiation surgery, electro-surgery)	<a href="#">A61B 18/00</a>
Instruments, implements, tools, or methods specially adapted so as to limit their use to only animals	<a href="#">A61D</a>
Apparatus or methods utilizing direct mechanical energy in therapy intended to treat disease or disability	<a href="#">A61H</a>
Percussion or vibration massage apparatus (e.g. using supersonic vibration)	<a href="#">A61H 23/00</a>
Apparatus or methods for stimulating specific reflex points by heating or cooling within the cell-life limits	<a href="#">A61H 39/06</a>
Devices for applying radioactive material to the body	<a href="#">A61M 37/0069</a> , <a href="#">A61N 5/10</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Measuring bioelectrical signals of the body or body parts	<a href="#">A61B 5/24</a>
Surgical accessories	<a href="#">A61B 90/00</a>
Artificial substitutes or replacements for parts of the body	<a href="#">A61F 2/00</a>
Heating or cooling appliances for medical or therapeutic treatment	<a href="#">A61F 7/00</a>
Saunas	<a href="#">A61H 33/06</a>
Radiopharmaceuticals	<a href="#">A61K 51/12</a>
Anaesthetic apparatus in general	<a href="#">A61M</a>
Pressure infusion pumps	<a href="#">A61M 5/142</a>
Devices or methods to cause a change in the state of consciousness by mechanical, optical or acoustical means, e.g. audiovisual stimuli	<a href="#">A61M 21/00</a>
Artificial hearts and circulatory assistance means intended for implantation	<a href="#">A61M 60/122</a>
Specific therapeutic activity of chemical compounds or medicinal preparations	<a href="#">A61P</a>
Measurement of nuclear X-radiation	<a href="#">G01T</a>
Techniques for handling of particles or electromagnetic radiation	<a href="#">G21K</a>
Incandescent lamps having general utility	<a href="#">H01K</a>
Infrared radiators for heating	<a href="#">H05B</a>

## A61N 1/00

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

### Definition statement

*This place covers:*

Details about electric fields which directly provide a therapeutic effect or which render the delivery of therapeutic substances possible; details about (components of) apparatuses which generate these electric fields.

### References

#### Limiting references

*This place does not cover:*

High frequency currents for surgery instead of therapy (i.e. higher temperatures so as to destroy tissue instead of healing tissue)	<a href="#">A61B 18/12</a>
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#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Irradiation apparatus	<a href="#">A61N 5/00</a>
Measuring blood pressure / blood flow	<a href="#">A61B 5/02</a>
Measuring blood output from heart	<a href="#">A61B 5/029</a>
Measuring electrical impedance of a portion of the human body	<a href="#">A61B 5/053</a>
Measuring movement of the entire body or parts thereof	<a href="#">A61B 5/11</a>
Detecting specific parameters of the ECG cycle	<a href="#">A61B 5/349</a>
Detecting muscle signals	<a href="#">A61B 5/389</a>
Detecting urogenital signals	<a href="#">A61B 5/391</a>
Detecting gastrointestinal signals	<a href="#">A61B 5/392</a>
Diagnosis using ultrasound in general	<a href="#">A61B 8/00</a>
Measuring blood pressure by ultrasound	<a href="#">A61B 8/04</a>
Measuring blood flow by ultrasound	<a href="#">A61B 8/06</a>
Gastric anti-eating devices using electrical stimulation	<a href="#">A61F 5/0026</a>
Devices implantable in the eye e.g. ocular inserts	<a href="#">A61F 9/0017</a>
Devices for eye surgery	<a href="#">A61F 9/007</a>
Mechanical stimulation of ear nerves	<a href="#">A61F 11/04</a>
Heart stimulation by mechanical means	<a href="#">A61H 31/004</a>
Stimulating specific reflex points using electric currents	<a href="#">A61H 39/002</a>
Percussion or vibration massage with electrotherapy	<a href="#">A61H 2201/10</a>
Acoustically, mechanically or optically inducing sleep or relaxation	<a href="#">A61M 21/02</a>
Electrically conditioning the air e.g. by ionising	<a href="#">B60H 3/0071</a>
Applying static electricity for purifying the air	<a href="#">F24F 8/192</a>
Recognising signal patterns per se	<a href="#">G06F 2218/00</a>

ICT specially adapted for therapies or health-improving plans (e.g. for handling prescriptions, for steering therapy or for monitoring patient compliance) relating to mechanical, radiation or invasive therapies (e.g. surgery, laser therapy, dialysis or acupuncture)	<a href="#">G16H 20/40</a>
Deaf aid sets	<a href="#">H04R 25/00</a>

## Special rules of classification

Additional information could be either

- specific details about components, signals or algorithms which are not related to the invention as such; or
- less preferred embodiments which are shortly mentioned (e.g. inventive specification of cochlear implants which can be used for retinal implants as well).

Documents with such information should be given an Indexing Code.

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

AAI	single chamber atrial pacemaker with inhibited mode
AED	automatic external defibrillator
AEI	atrial escape interval
AV	atrioventricular
AVD	atrioventricular delay
AVI	atrioventricular interval
BPM	beats per minute
CHD	coronary heart disease
CHF	chronic heart failure
CO	cardiac output
CRT	cardiac resynchronisation therapy
DBS	deep brain stimulation
DDD	biventricular pacemaker e stimulation rate with dual mode
DDDR	DDD pacemaker with pacing rate dependent on sensor output
DDI	biventricular pacemaker with inhibited mode
ECG	electrocardiogram
EKG	electrocardiogram
HR	heart rate
ICD	implantable cardioverter defibrillator
IMD	implantable medical device
IPG	implantable pulse generator
NS	neural stimulation
PAVB	post-atrial ventricular blanking
PESP	postextrasystolic potentiation
PMT	pacemaker mediated tachycardia

SV	stroke volume
SVT	supraventricular tachycardia
VDD	pacemaker that senses the atrium and ventricle and paces the ventricle with dual mode
VF	ventricular fibrillation
VT	ventricular tachycardia
VVI	single chamber ventricular pacemaker with inhibited mode

## A61N 1/04

### Electrodes {(electrosurgical electrodes [A61B 18/14](#))}

#### Definition statement

*This place covers:*

Details about the electrodes and their associated leads specially adapted for delivering electrical therapeutic stimulation.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Patient's garment with incorporated electrodes for medical monitoring	<a href="#">A41D 13/1281</a>
Electrodes specially adapted for ECG	<a href="#">A61B 5/25</a>
Electrodes specially adapted for EEG	<a href="#">A61B 5/291</a>
Electrodes specially adapted for EMG	<a href="#">A61B 5/296</a>
Electrodes for electrosurgery	<a href="#">A61B 18/14</a>
Stents and instruments for their placement	<a href="#">A61F 2/82</a>
Stimulating specific reflex points using electric currents	<a href="#">A61H 39/002</a>
Anchoring by balloon expansion	<a href="#">A61M 25/10</a>
Form details about flexible conductors per se	<a href="#">H01B 7/04</a>
Form details about conductors for implantation in a human body	<a href="#">H01B 7/048</a>

#### Special rules of classification

Details about the stimulating device as such, about the therapeutic signal and/or about the stimulating algorithm should be classified in [A61N 1/36-A61N 1/3712](#).

## A61N 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](#))}**

#### Definition statement

*This place covers:*

Protecting the functioning of electrical therapeutic stimulation devices, especially against MRI.

## Definition statement

This group only relates to protection (especially against MRI) for electrical therapeutic stimulation devices and not for other types of medical devices such as drug pumps. The purpose of this protection is to protect the functioning of the medical device.

## References

### Limiting references

*This place does not cover:*

For external stimulators	<a href="#">A61N 1/3603</a>
For implantable neurostimulators	<a href="#">A61N 1/36128</a>
Monitoring or protecting for heart stimulators	<a href="#">A61N 1/37</a>
Monitoring or protecting for defibrillators	<a href="#">A61N 1/3925</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Neutralising atmospheric radiation	<a href="#">A61N 1/16</a>
Mattresses for protecting against e.g. static electricity or radiation	<a href="#">A47C 31/004</a>
Dynamisation and other esoteric therapies using medicinal preparations obtained by wave energy	<a href="#">A61K 41/0004</a>
NMR gyrometers	<a href="#">G01C 19/60</a>
Measuring electric variables	<a href="#">G01R</a>
Instruments for measuring magnetic variables involving magnetic resonance	<a href="#">G01R 33/20</a>
Provisions within MR facilities for enhancing safety during MR	<a href="#">G01R 33/288</a>
Control of generator output per se	<a href="#">H02P</a> , <a href="#">H03L</a>
Screening of apparatus or components against electric or magnetic fields	<a href="#">H05K 9/00</a>

## Special rules of classification

Protecting the functioning of the medical device constitutes the difference with [A61N 1/16](#), which relates to protecting the human body. E.g. pacemaker circuitry protecting the pacemaker from the field of a TV antenna should go to [A61N 1/08](#) whereas as special building arrangement for protecting a person from the same field to [A61N 1/16](#).

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

MR	magnetic resonance
MRI	magnetic resonance imaging
NMR	nuclear magnetic resonance

**A61N 1/086****{Magnetic resonance imaging [MRI] compatible leads}****Definition statement***This place covers:*

Leads (both implantable and external) having features that mitigate the effects of unwanted electric currents induced by a Magnetic Resonance Imaging [MRI] device or field.

**A61N 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](#))}****Definition statement***This place covers:*

Screening or neutralising atmospheric or terrestrial radiation or fields with the purpose of protecting the human body. The purpose of this protection is to protect the human body.

**References****Limiting references***This place does not cover:*

Electrostimulators protected for electromagnetic interference	<a href="#">A61N 1/08</a>
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**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Measuring magnetic field characteristics of the earth	<a href="#">G01V 3/00</a>
Carrying-off electrical charges using atmospheric electricity or earth currents	<a href="#">H05F 3/00</a>

**Special rules of classification**

Protecting the human body constitutes the difference with [A61N 1/08](#), which relates to protecting the functioning of the medical device. E.g. pacemaker circuitry protecting the pacemaker from the field of a TV antenna should go to [A61N 1/08](#) whereas as special building arrangement for protecting a person from the same field to [A61N 1/16](#). [A61N 1/08](#) takes precedence over [A61N 1/16](#).

**A61N 1/36****for stimulation****Definition statement***This place covers:*

Details about the therapeutic signal and/or about the stimulation algorithm, constructional and/or circuitry details, telemetry details.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Details about the electrodes or the leads	<a href="#">A61N 1/04</a> , <a href="#">A61N 1/06</a>
Applying constant continuous current	<a href="#">A61N 1/20</a> - <a href="#">A61N 1/306</a>
Electromedical belts	<a href="#">A61N 1/321</a>
Electromedical brushes, combs, massage devices	<a href="#">A61N 1/322</a>
Interference currents	<a href="#">A61N 1/323</a>
Iontophoresis	<a href="#">A61N 1/325</a>
Promoting growth of cells	<a href="#">A61N 1/326</a>
Electroporation	<a href="#">A61N 1/327</a>
Improving skin appearance	<a href="#">A61N 1/328</a>

## A61N 1/36002

{Cancer treatment, e.g. tumour}

### Definition statement

*This place covers:*

Covers devices (both implanted and external to the body) that treat cancer by electrical stimulation.

## A61N 1/3603

{Control systems}

### Definition statement

*This place covers:*

Covers features of control systems used by electrical stimulation devices that are external to the body (e.g. switches/buttons used for controlling TENS devices, control displays for pain relief devices, controlling modes of operation for muscle stimulators, algorithms/flow charts for controlling external stimulation devices, etc.).

## A61N 1/36031

{using physiological parameters for adjustment}

### Definition statement

*This place covers:*

Device control systems under [A61N 1/3603](#), which adjust therapeutic electrical stimulation based upon at least one sensed physiological parameter.



**A61N 1/36034****{specified by the stimulation parameters}****Definition statement***This place covers:*

Device control systems under [A61N 1/3603](#), which are characterised by their stimulation parameters (e.g. frequency, amplitude, pulse width, multiphasic, combination of waveforms, etc.).

**A61N 1/36036****{of the outer, middle or inner ear}****Definition statement***This place covers:*

Covers therapeutic devices that electrically stimulate portions of a patient's outer, middle, or inner ear.

**A61N 1/36038****{Cochlear stimulation}****Definition statement***This place covers:*

Devices under [A61N 1/36036](#) that electrically stimulate a patient's cochlea.

**A61N 1/36039****{fitting procedures}****Definition statement***This place covers:*

Devices and methods used for fitting a patient with a cochlear stimulation device or setting a cochlea stimulation parameter (as described in [A61N 1/36038](#)) (This subgroup is intended for devices having more than a general mention of fitting or stimulation parameters).

**A61N 1/3604****{for correcting spinal deformities, e.g. scoliosis}****Definition statement***This place covers:*

Electrical stimulation devices used for correcting spinal deformities.

**A61N 1/36062****{Spinal stimulation}****Definition statement***This place covers:*

Includes implantable neurostimulation devices and associated methods used to perform spinal stimulation (as described in [A61N 1/3605](#)).

**A61N 1/3614****{based on impedance measurement}****Definition statement***This place covers:*

Control systems for implantable neural stimulation devices (under [A61N 1/3605](#)) which measure impedance (This subgroup is intended for devices having more than a general mention of impedance).

**A61N 1/3629****{in combination with non-electric therapy}****Definition statement***This place covers:*

Heart stimulation devices (e.g. pacemakers) under ([A61N 1/362](#)) which also include an additional non-electric therapy to the heart or other body area (e.g. drug therapy, nanotherapy, gene therapy, etc.).

**A61N 1/3684****{for stimulating the heart at multiple sites of the ventricle or the atrium}****Definition statement***This place covers:*

Heart stimulation devices under [A61N 1/368](#), which include dual chamber pacemakers (e.g. pacers using DDD modes of operation) and pacing devices that electrically stimulate multiple sites within the 4 chambers of the heart.

**A61N 1/36842****{Multi-site stimulation in the same chamber}****Definition statement***This place covers:*

Covers heart stimulation devices under [A61N 1/3684](#) having more than one stimulation site within the same heart chamber (e.g. two stimulation electrodes in the right ventricle that deliver separate and/or different stimulation to each electrode, etc.).

**A61N 1/36843****{Bi-ventricular stimulation}****Definition statement***This place covers:*

Covers heart stimulation devices which stimulate both the right ventricle [RV] and the left ventricle [LV].

## A61N 1/372

### Arrangements in connection with the implantation of stimulators

#### Definition statement

*This place covers:*

Specifications going beyond the implantable medical device in isolation, such as communicating with, delivering power to, or testing of the implantable medical device.

Structural details of (parts of) the implantable medical device, e.g. casing or feedthrough.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Details about leads and electrodes	<a href="#">A61N 1/04 - A61N 1/06</a>
Transmitting measured data to processing apparatus	<a href="#">A61B 5/0002</a>
Transferring electromagnetic energy to implanted prostheses	<a href="#">A61F 2250/0001</a>
Transferring data to implanted prostheses	<a href="#">A61F 2250/0001</a>
Materials for catheters	<a href="#">A61L 29/00</a>
Materials for coating of implanted articles	<a href="#">A61L 31/08</a>
Testing electrical condition of batteries per se	<a href="#">G01R 31/36</a>
Transmitting signals with a radio link per se	<a href="#">G08C 17/02</a>
ICT specially adapted for therapies or health-improving plans (e.g. for handling prescriptions, for steering therapy or for monitoring patient compliance) relating to mechanical, radiation or invasive therapies (e.g. surgery, laser therapy, dialysis or acupuncture)	<a href="#">G16H 20/40</a>
ICT specially adapted for the operation of medical equipment or devices	<a href="#">G16H 40/60</a>
Sealing of leads to lead-through insulators per se	<a href="#">H01B 17/303</a>
Feedthrough capacitors per se	<a href="#">H01G 4/35</a>
Batteries per se	<a href="#">H01M</a>
Manufacture of small size batteries per se	<a href="#">H01M 10/0436</a>
Electrical connections per se	<a href="#">H01R</a>
Electrical connections for medical use	<a href="#">H01R 13/5224</a>
Adapters for connecting two parts per se	<a href="#">H01R 31/06</a>
Electrical connectors for medicine and surgery	<a href="#">H01R 2201/12</a>
Charging batteries per se	<a href="#">H02J 7/00</a>
For wireless supply or distribution of electric power	<a href="#">H02J 50/00</a>
Near-field (inductive) transmission systems per se	<a href="#">H04B 5/00</a>
Radio transmission systems per se	<a href="#">H04B 7/00</a>
Transmission of digital information per se	<a href="#">H04L</a>
Transmitting circuits using pulse with modulation or pulse position modulation	<a href="#">H04L 25/4902</a>

**A61N 1/37254**

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

**Definition statement**

*This place covers:*

Devices and methods used to provide security (both programming and physical) for electrical stimulation devices (in particular pacemakers and defibrillators) to combat hackers and other unauthorised persons from accessing/re-programming electrical stimulation devices.

**A61N 1/37512**

**{Pacemakers}**

**Definition statement**

*This place covers:*

Covers device features related to the construction of pacemakers (i.e. housings/can details, material, shape, etc.).

**A61N 1/37514**

**{Brain implants}**

**Definition statement**

*This place covers:*

Covers device features related to the construction of brain implants (i.e. housing or can details, material, shape, etc.).

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Burr Hole Covers	<a href="#">A61B 90/00</a>
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**A61N 1/37516**

**{Intravascular implants}**

**Definition statement**

*This place covers:*

Covers device features related to the construction of intravascular implants (i.e. housing details, material, shape, etc.).

**A61N 1/37518****{Anchoring of the implants, e.g. fixation}****Definition statement***This place covers:*

Covers anchoring/fixation details of electrical stimulation devices.

**A61N 1/38****for producing shock effects****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Electrolytic capacitors per se	<a href="#">H01G 9/10</a>
For producing shock effects per se	<a href="#">H05C 1/00</a>

**Synonyms and Keywords***In patent documents, the following abbreviations are often used:*

AF	atrial fibrillation
VF	ventricular fibrillation

**A61N 1/3904****{External heart defibrillators [EHD]}****Definition statement***This place covers:*

Covers external heart defibrillators (e.g. Automatic External Defibrillators [AEDs], semi-automatic external defibrillators, manual) and methods for constructing and using them.

**A61N 1/39044****{in combination with cardiopulmonary resuscitation [CPR] therapy}****Definition statement***This place covers:*

External defibrillators and methods for using them for performing or assisting in cardiopulmonary resuscitation [CPR] therapy.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Cardiopulmonary Resuscitation [CPR] therapy	<a href="#">A61H 31/00</a>
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**A61N 1/39046****{User protection from shock}****Definition statement***This place covers:*

External defibrillators which include features that protect a user or patient from an accidental or unwanted shock.

**A61N 1/3962****{in combination with another heart therapy}****Definition statement***This place covers:*

Implantable defibrillator which in addition to electrical shock therapy, also provides another form of heart therapy (e.g. drug therapy, gene therapy, nanotherapy, etc.).

**A61N 1/39622****{Pacing therapy}****Definition statement***This place covers:*

Implantable defibrillators under [A61N 1/3962](#) which apply pacing therapy in addition to defibrillation shocks.

**A61N 1/39624****{Pain reduction therapy}****Definition statement***This place covers:*

Implantable defibrillators under [A61N 1/3962](#) which apply electrical stimulation therapy for pain reduction.

**A61N 1/44****Applying ionised fluids {(ion generators [H01J 37/00](#))}****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Baths for special therapeutic purposes	<a href="#">A61H 33/00</a>
Baths for specific parts of the body	<a href="#">A61H 35/00</a>
Ionised inhalator	<a href="#">A61M 15/02</a>
Ion generators	<a href="#">H01J 37/00</a>
Generating ions into the atmosphere	<a href="#">H01T 23/00</a>

## A61N 2/00

### Magnetotherapy

#### Definition statement

*This place covers:*

Use of static or dynamic magnetic fields for treating humans or animals, where the magnetic field itself provides the therapeutic effect.

#### References

##### Limiting references

*This place does not cover:*

Using a magnetic field for diagnosis	<a href="#">A61B 5/05</a> , <a href="#">G01R 33/00</a>
Medicinal preparations obtained with a magnetic field	<a href="#">A61K 41/00</a>
Releasing a medicament through the use of a magnetic field	<a href="#">B03C 1/00</a>

## A61N 5/00

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

#### Definition statement

*This place covers:*

Therapeutic treatment of the human or animal body with electromagnetic or particle radiation.

Therapy implies the curing of a disease or malfunction of the body and includes prophylactic treatment like killing of germs, bacteria in or on the body by means of radiation as well as treatment of symptoms like pain (anaesthesia) by means of radiation.

#### References

##### Limiting references

*This place does not cover:*

Magnetotherapy	<a href="#">A61N 2/00</a>
Ultrasound therapy	<a href="#">A61N 7/00</a>
Radiation imaging or diagnosis	<a href="#">A61B 6/00</a>
Surgery with radiation (cf. special rules below)	<a href="#">A61B 18/18</a> , <a href="#">A61F 9/008</a> , <a href="#">A61C 1/0046</a>
Treatment by heat, sauna	<a href="#">A61F 7/00</a> , <a href="#">A61H 33/00</a>
Sterilization or disinfection of articles or products by radiation	<a href="#">A61L 2/08</a>
Lighting	<a href="#">F21</a>
Irradiation devices for articles or products	<a href="#">G21K 5/00</a>
Lithography with a particle beam	<a href="#">H01J 37/30</a>
Ion implantation in semiconductors	<a href="#">H10P 34/00</a>

**Application-oriented references**

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Devices or apparatus applicable to both therapy and diagnosis	<a href="#">A61B 6/00</a>
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**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Patient movement or breathing monitoring	<a href="#">A61B 5/11</a> , <a href="#">A61B 5/113</a>
Sensing at the treatment site	<a href="#">A61B 2017/00022</a> , <a href="#">A61B 2018/00636</a> , <a href="#">A61B 5/0048</a> , <a href="#">A61B 5/053</a> , <a href="#">A61B 5/0059</a>
Balloons for catheter applicators	<a href="#">A61B 2017/22051</a>
Medical informatics, patient data management	<a href="#">A61B 34/00</a>
Protection of tissue around treatment site	<a href="#">A61B 90/04</a>
Site contact feedback, abutting means	<a href="#">A61B 2090/065</a> , <a href="#">A61B 90/03</a>
Patient positioning	<a href="#">A61B 90/10</a>
Navigation, image assistance	<a href="#">A61B 90/36</a> , <a href="#">A61B 6/12</a> , <a href="#">A61B 8/12</a>
Markers	<a href="#">A61B 90/39</a>
Curing resins within the teeth	<a href="#">A61C 19/003</a>
Teeth whitening by light	<a href="#">A61C 19/066</a>
Acupuncture	<a href="#">A61H 39/00</a>
Photosensitizers, radiosensitisers	<a href="#">A61K 41/00</a>
Radionuclides, radiopharmaceuticals	<a href="#">A61K 51/00</a>
Irradiation of blood outside the patient (ex-vivo)	<a href="#">A61M 1/3681</a>
Psychological treatments	<a href="#">A61M 21/00</a> , <a href="#">A61M 2021/0044</a> , <a href="#">A61M 2021/0055</a>
(Balloon) catheters	<a href="#">A61M 25/10</a>
Devices for implanting pellets or seeds	<a href="#">A61M 37/0069</a>
Radiation measurement devices, dosimeters, beam monitors	<a href="#">G01T</a> , e.g. <a href="#">G01T 1/02</a> , <a href="#">G01T 1/161</a> , <a href="#">G01T 1/2914</a>
Filters	<a href="#">G02B 5/20</a>
Light guides	<a href="#">G02B 6/00</a> , <a href="#">A61B 18/22</a>
ICT specially adapted for therapies or health-improving plans (e.g. for handling prescriptions, for steering therapy or for monitoring patient compliance) relating to mechanical, radiation or invasive therapies (e.g. surgery, laser therapy, dialysis or acupuncture)	<a href="#">G16H 20/40</a>
Radiation Shielding	<a href="#">G21F 1/00</a> , <a href="#">G21F 3/00</a> ; <a href="#">G21F 5/00</a>
Radiation sources	<a href="#">G21G 1/00</a> , <a href="#">G21G 4/00</a>



Beam transport, forming, focussing, filtering	<a href="#">G21K</a> , e.g. <a href="#">G21K 1/00</a> , <a href="#">G21K 1/10</a> , <a href="#">G21K 5/04</a> , <a href="#">G21K 5/10</a>
X-ray tubes	<a href="#">H01J 35/00</a> , <a href="#">H01J 35/32</a>
Vapour or discharge lamps, tubes	<a href="#">H01J 61/00</a>
Lasers	<a href="#">H01S 3/00</a> , <a href="#">A61B 18/20</a> , <a href="#">A61C 1/0046</a> , <a href="#">A61F 9/008</a>
Accelerator Technology	<a href="#">H05H</a> , e.g. <a href="#">H05H 13/00</a> , <a href="#">H05H 7/10</a>
LEDs	<a href="#">H10H 20/00</a>

### Special rules of classification

The IPC group **A61M36/00** is not used: these devices are instead classified in [A61N 5/10](#), since their purpose is therapeutic.

#### Surgery vs. Therapy

In contrast to the therapeutic applications covered by this group, surgery is characterized by the immediate and direct destruction or transformation of the tissue (ablation, vaporization, coagulation...). For therapy, the effect in the tissue is induced with rather lower intensity and power levels and/or longer pulse durations (photothermal, photochemical reactions, biostimulation...). Thus, for instance, cell destruction by photoactivation of an agent is to be classified in [A61N 5/062](#). Some devices may be used for both applications depending on the operation mode.

Note that [A61N 5/1084](#) covers focussed radiotherapy applications like "gamma knife" and stereotactic radiotherapy which are sometimes also called "radiosurgery", which is not to be confused with surgery in the sense of [A61B 18/00](#).

#### Light therapy ([A61N 5/06](#))

The scheme in [A61N 5/06](#) contains several independent classification trees covering different aspects of a light therapy apparatus.

The therapeutic application is meant to be classified in [A61N 5/0613](#) and lower hierarchical groups thereof for external treatments or [A61N 5/0601](#) and lower hierarchical groups thereof for internal treatments.

Further aspects are then classified in codes according to the area of treatment (subgroups of [A61N 2005/0635](#)), the type of light source used (subgroups of [A61N 2005/065](#)), and the wavelength of therapeutic light (subgroups of [A61N 2005/0658](#)).

Aspects like coherence of the therapeutic light ([A61N 5/067](#)) and polarisation ([A61N 2005/073](#)) are also to be coded.

For some aspects, no suitable code is available and in such cases, sometimes the scheme of a neighbouring field is used: subgroups of [A61B 2018/00773](#) or [A61B 2017/00022](#) (feedback at the treatment site), [A61B 2018/2255](#) (features at the distal end of a light guide, e.g. diffusers).

Note: devices of [A61N 5/0614](#) (tanning) do not need to be classified in [A61N 2005/0661](#) since the ultraviolet light is there by necessity.

#### Particle and X-ray therapy ([A61N 5/10](#))

In the [A61N 5/10](#) part, there is a similar aspect coded in [A61N 2005/1085](#) (type of particles, e.g. ions, electrons, neutrons, low energy photons etc.). This code is obligatory for the particles specified in the

subgroups of [A61N 2005/1085](#). Only normal energy (MeV) photons are not coded in this tree, since it concerns the default situation.

The group [A61N 5/01](#) should not be used for radiotherapy gantries, since a rotating gantry is common and not worth to classify.

## Synonyms and Keywords

*In patent documents, the following abbreviations are often used:*

IMRT	Intensity Modulated Radiation Therapy
IMAT	Intensity Modulated Arc Therapy
IGRT	Image Guided Radiation Therapy
MLC	Multileaf Collimator
SAS	Step And Shot
(O)LED	(Organic) Light Emitting Diode
DRR	Digitally Reconstructed Radiograph
SOBP	Spread-Out Bragg Peak
DVH	Dose Volume Histogram
EPI	Electronic Portal Imaging
OAR	Organ At Risk

## A61N 5/025

**{Warming the body, e.g. hyperthermia treatment}**

## References

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

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>

## A61N 5/0601

**{Apparatus for use inside the body}**

## References

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Illuminating body cavities	<a href="#">A61B 1/06</a>
By using a source unit in the interior of the body	<a href="#">A61B 6/4057</a>
By intraoral means	<a href="#">A61B 6/512</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>
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## **A61N 5/0618**

**{Psychological treatment}**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Other devices or methods to cause a change in the state of consciousness; Devices for producing or ending sleep by mechanical, optical, or acoustical means, e.g. for hypnosis	<a href="#">A61M 21/00</a>
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## **A61N 5/0619**

**{Acupuncture}**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Acupuncture in general	<a href="#">A61H 39/00</a>
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## **A61N 5/0624**

**{for eliminating microbes, germs, bacteria on or in the body}**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Sterilization of articles or products by radiation	<a href="#">A61L 2/08</a>
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## **A61N 5/0625**

**{Warming the body, e.g. hyperthermia treatment}**

### **References**

#### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Heating by RF	<a href="#">A61N 1/403</a>
Heating using microwaves	<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>

**A61N 5/10**

**X-ray therapy; Gamma-ray therapy; Particle-irradiation therapy ([A61N 5/01](#) takes precedence)**

**References****Limiting references**

*This place does not cover:*

Devices for producing movement of radiation source during therapy	<a href="#">A61N 5/01</a>
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**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Radiation diagnosis, e.g. combined with radiation therapy	<a href="#">A61B 6/00</a>
Irradiation devices in general	<a href="#">G21K 1/00</a>
X-ray tubes, Lenard tubes	<a href="#">H01J 35/00</a>
X-ray techniques, in particular circuits for feeding or controlling X-ray tubes	<a href="#">H05G</a>

**A61N 5/1002**

**{Intraluminal radiation therapy}**

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Intraluminal catheters in general	<a href="#">A61M 25/00</a>
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**A61N 5/1007**

**{Arrangements or means for the introduction of sources into the body}**

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Needle guides in general	<a href="#">A61B 17/3403</a>
Apparatus for implanting surgical devices	<a href="#">A61B 17/3468</a>
Devices for implanting seeds or pellets in general	<a href="#">A61M 37/0069</a>

**A61N 5/1029****{Radioactive dressings}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

FILTERS IMPLANTABLE INTO BLOOD VESSELS; PROSTHESES; DEVICES PROVIDING PATENCY TO, OR PREVENTING COLLAPSING OF, TUBULAR STRUCTURES OF THE BODY, E.G. STENTS; ORTHOPAEDIC, NURSING OR CONTRACEPTIVE DEVICES; FOMENTATION; TREATMENT OR PROTECTION OF EYES OR EARS; BANDAGES, DRESSINGS OR ABSORBENT PADS; FIRST-AID KITS	<a href="#">A61F</a>
Dressings in general	<a href="#">A61L 15/00</a>

**A61N 2005/1051****{using an active marker}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Markers for surgery or diagnosis, e.g. radio-opaque or breast lesions markers	<a href="#">A61B 90/39</a>
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**A61N 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](#)})**

**Definition statement***This place covers:*

Ultrasound therapy of the human or animal body. Also included is the thermal destruction of tissue in the focal point of a high intensity ultrasound beam.

**References****Limiting references***This place does not cover:*

Removal of calculi, thromboses etc. by ultrasound	<a href="#">A61B 17/22004</a>
Extracorporeal shock waves (with mainly mechanical effect, e.g. lithotripters)	<a href="#">A61B 17/225</a>
Cutting using ultrasonic vibrations, e.g. with vibrating knife	<a href="#">A61B 17/320068</a>
Devices creating a mechanical shock wave by laser light	<a href="#">A61B 18/26</a>
Apparatus for introducing media into the body using ultrasonic waves, phonophoresis	<a href="#">A61M 37/0092</a>

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Ultrasound diagnosis	<a href="#">A61B 8/00</a>
Accessories for surgery or diagnosis	<a href="#">A61B 90/00</a>
Ultrasound imaging during surgical procedures	<a href="#">A61B 2090/378</a>
Percussion or vibration massage	<a href="#">A61H 23/00</a>
Generating mechanical vibrations	<a href="#">B06B 1/00</a>
Transmitting, conducting and directing sound in general	<a href="#">G10K 11/00</a>

**Special rules of classification**[A61N 7/00](#)

Ultrasound therapy with negligible thermal effect. Treatment area not reduced to a focal point. E.g. devices for bone fracture healing.

[A61N 2007/0004](#)

The subgroups define various application areas on the body to be treated or therapeutic applications. Headgroup [A61N 2007/0004](#) not to be used for classification.

[A61N 7/02](#)

Localized ultrasound hyperthermia, high intensity focused ultrasound (HIFU). The effect is primary a thermal one of substantially heating tissue above the normal temperature or even above the point of tissue destruction. Mechanical percussion to destroy calculi is to be classified in [A61B 17/22004](#) or [A61B 17/225](#) in case of external shockwaves.

[A61N 7/022](#)

Intracavitary localized hyperthermia. The probe or transducer is located within a body cavity.

**Glossary of terms**

In this place, the following terms or expressions are used with the meaning indicated:

HIFU	high intensity focused ultrasound
Phased array transducer	transducer consisting of an array of small transducers individually adressable with a time delay to steer the focal point of the beam

**A61N 7/02****Localised ultrasound hyperthermia****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Heating or cooling appliances for medical or therapeutic treatment of the human body	<a href="#">A61F 7/00</a>
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