

Search query (29): [SP]: In various embodiments, the system comprises, consists essentially of, or consists of one, two, three, or more embodiments of any features or components disclosed herein. [0060] In some embodiments, the system comprises various features that are present as single features (as opposed to multiple features). In some embodiments, devices and methods of improved ultrasound imaging provide better correlation between movement in a first and second direction when forming images. Embodiments of the invention provide better imaging correlation between a first moving direction and a second moving direction, (e.g., better correlation between left-traveling & right-traveling formed images). [0018] One benefit of a motion mechanism is that it can provide for a more efficient, accurate and precise use of an ultrasound transducer, for imaging and/or therapy purposes. Even if there is sufficient coupling, tissues or objects, such as bone or an implant can cause challenges since these objects can have a different acoustic impedance and absorption characteristics than soft tissue (e.g. skin, muscle). In some embodiments, the system 20 does not comprise a cart 301. Unfortunately, any pockets of air between the transducer and tissue prevent proper coupling and can therefore cause an inadequate transfer of the ultrasound therapy energy. 1. An ultrasound treatment and imaging system configured for reducing imaging misalignment, comprising: an ultrasonic probe comprising an ultrasound therapy transducer adapted to apply ultrasonic therapy to tissue, an ultrasound imaging transducer adapted for imaging the tissue, and a motion mechanism for moving the ultrasound imaging transducer in a first direction and a second direction, wherein the ultrasound imaging transducer is mechanically attached to the motion mechanism, wherein the first direction is opposite the second direction, wherein the ultrasound imaging transducer images with a focal zone sequence order (f₁; ..., f_N), where N>1 when travelling in the first direction, wherein the ultrasound imaging transducer images with a second focal zone sequence order (f_N, ..., f₁) when travelling in the second direction, wherein a spatial registration between the first direction imaging and the second direction imaging is improved by staggering a triggering location, wherein the ultrasound treatment and imaging system employs a directionally dependent focal zone sequencing with alternating between (f₁ - ... - f_N) and (f_N - ... - f₁) on consecutive A-lines; and a control module coupled to the ultrasonic probe for controlling the ultrasound imaging transducer. 34. A method of reducing imaging misalignment in a moving ultrasound probe, comprising: staggering a triggering location of a spatial registration between a first direction imaging and a second direction imaging with an ultrasonic probe, the ultrasound probe comprising an ultrasound therapy transducer adapted to apply ultrasonic therapy to tissue, an ultrasound imaging transducer adapted for imaging the tissue, and a motion mechanism for moving the ultrasound imaging transducer in the first direction and the second direction, wherein the ultrasound imaging transducer is mechanically attached to the motion mechanism, wherein the first direction is opposite the second direction, wherein the ultrasound imaging transducer images with a first focal zone sequence order (f₁; ..., f_N), with N>2, when travelling in the first direction, wherein the ultrasound imaging transducer images with a second focal zone sequence order (f_N, ..., f₁) when travelling in the second direction. 41. An ultrasound treatment system for dithering multiple simultaneous focus points from an ultrasound transducer, comprising: an ultrasonic probe comprising an ultrasound transducer with a single transduction element adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of spaced locations at a focal depth, wherein the ultrasound transducer is poled with at least a first poling configuration and a second poling configuration, a control module coupled to the ultrasonic probe for controlling the ultrasound transducer, wherein the control module modifies the spacing between the spaced locations via dithering of a first focal zone and a second focal zone, such that dithering via modulation of a frequency precisely moves a position of a beam focus point at the spaced locations. 56. An ultrasound treatment system for use in cosmetic treatment for dithering multiple simultaneous focal points from an ultrasound transducer, the system comprising: an ultrasonic probe comprising: a control module adapted to modify a spacing between a first focal zone and a second focal zone via dithering, a switch operably controlling an ultrasonic treatment function for providing an ultrasonic treatment; and a movement mechanism adapted to direct ultrasonic treatment in at least one pair of simultaneous sequences of individual thermal cosmetic treatment zones; and a transducer module adapted to apply ultrasonic therapy, wherein the transducer module is adapted for both ultrasonic imaging and ultrasonic treatment, wherein the transducer module is adapted for coupling to the ultrasonic probe, wherein the transducer module comprises an ultrasound transducer adapted to apply ultrasonic therapy to tissue at a plurality of locations at a focal depth, wherein the transducer module is adapted to be operably coupled to at least one of the switch and the movement mechanism; and wherein the control module comprises a processor and a display for controlling the transducer module. 59. An ultrasound treatment system for dithering multi-focus treatment, comprising: a module comprising an ultrasound transducer, wherein the ultrasound transducer is adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of spaced locations in tissue, wherein the module modifies a spacing between the plurality of spaced locations via dithering of a first focal zone and a second focal zone, such that dithering via modulation of a frequency precisely moves a position of a beam focus point at the plurality of spaced locations, wherein the module further comprises an interface guide designed to for removable coupling to a hand wand to provide electronic communication and power between the module and the hand wand. 66. A method of dithering simultaneous focused ultrasound treatment beams, comprising: providing an ultrasonic probe comprising a single transduction element adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of spaced locations at a focal depth and a control module coupled to the ultrasonic probe for controlling the ultrasound transducer, and dithering the spacing between the spaced locations of a first focal zone and a second focal zone via modulation of a frequency to move a position of an ultrasound focus point at the spaced locations. 74. A method of dithering a focused ultrasound beam, comprising: providing an ultrasonic probe comprising a single transduction element and a control module, wherein the single transduction element is adapted to apply ultrasonic therapy to tissue at a focal zone at a focal depth, wherein the control module is coupled to the ultrasonic probe for controlling the single transduction element, and dithering the focal zone via modulation of a frequency to alter a size of the focal zone at the tissue. 81. An ultrasound treatment system configured for generating multiple simultaneous focus points from an ultrasound transducer, comprising: an ultrasonic probe comprising an ultrasound transducer with a multiple transduction elements adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of spaced locations, wherein each transduction element comprises a channel wherein the ultrasonic probe has a geometric focus; wherein the ultrasonic probe has a first electronic focus; and wherein the ultrasonic probe has a second electronic focus; a control module coupled to the ultrasonic probe for controlling the ultrasound transducer, wherein the control module modifies the spacing between the spaced locations via dithering of a first focal zone and a second focal zone, such that dithering via an excitation function that moves a position of a beam focus point at the spaced locations. 93. An ultrasound treatment system for use in cosmetic treatment for forming multiple simultaneous focal zones from an ultrasound transducer, the system comprising: an ultrasonic probe comprising: a control module adapted to modify a spacing between a first focal zone and a second focal zone, a switch operably controlling an ultrasonic treatment function for providing an ultrasonic treatment; and a movement mechanism adapted to direct ultrasonic treatment in at least one pair of simultaneous sequences of individual thermal cosmetic treatment zones; and a transducer module adapted to apply ultrasonic therapy, wherein the transducer module is adapted for ultrasonic imaging and/or ultrasonic treatment, wherein the transducer module is adapted for coupling to the ultrasonic probe, wherein the transducer module comprises an ultrasound transducer adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of locations, wherein the transducer module is adapted to be operably coupled to at least one of the switch and the movement mechanism; and wherein the control module comprises a processor and a display for controlling the transducer module. 96. An ultrasound treatment system for generating a multi-focus treatment using multi-channel signal mixing, comprising: a module comprising an ultrasound transducer, wherein the ultrasound transducer is adapted to simultaneously apply ultrasonic therapy to tissue at a plurality of spaced locations in tissue, wherein the module modifies a spacing between the plurality of spaced locations between a first focal zone and a second focal zone, such that multi-channel signal mixing precisely moves a position of a beam focus point at the plurality of spaced locations, wherein the module further comprises an interface guide designed to for removable coupling to a hand wand to provide electronic communication and power between the module and the hand wand.

Results: 22

1) Family number: 68641012 (US2019142380A)

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Title: SYSTEMS AND METHODS FOR COSMETIC ULTRASOUND TREATMENT OF SKIN

Abstract: Embodiments of a dermatological cosmetic treatment and/or imaging system and method adapted for dithering ultrasound beams from a transducer to alter placement and position of one or multiple cosmetic treatment zones in tissue, simultaneous multi-focus therapy using multi-channel signal mixing, and/or dithering ultrasound beams from a transducer to alter placement and position of one or multiple cosmetic treatment zones in tissue, configured for using imaging for improved ultrasound therapy efficacy, and/or adapted for imaging with multiple focal zone sequencing and triggering for mechanically translated and/or steered ultrasound transducers are provided herein. The system can include a hand wand, a removable transducer module, and a control module. In some embodiments, the cosmetic treatment system may be used in various cosmetic procedures.

Classifications:

International (IPC 8-9): A61B8/00 A61B8/08 A61B8/14 A61N A61N7/00 A61N7/02 (Advanced/Invention);

A61B90/00 A61N7/00 (Advanced/Non-invention);

A61N (Subclass/Invention)

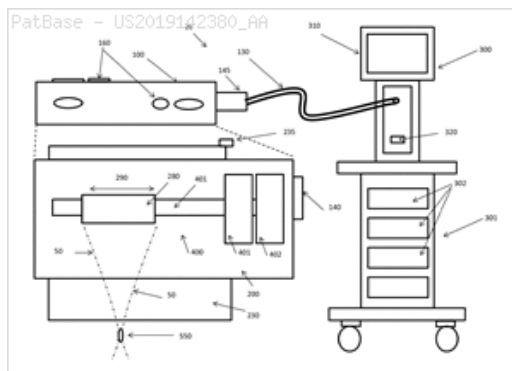
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A61N2007/027 A61B8/4483 A61B8/54 A61N2007/0082

US: 600/439



Family:

Publication number	Publication date	Application number	Application date
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BR112018072101 A2	20190219	BR20181172101	20170814
CA3022003 AA	20181023	CA20173022003	20170814
CN109562279 A	20190402	CN201780044113	20170814
CO20180011356 A2	20181031	CO20180011356	20181024
EP3500343 A1	20190626	EP20170841923	20170814
EP3500343 A4	20200415	EP20170841923	20170814
IL264440 A0	20190228	IL20170264440	20170814
JP2019528804 T2	20191017	JP20180560039T	20170814
KR20190041460 A	20190422	KR20197002932	20170814
MX2018013961 A1	20190918	MX20180013961	20170814
SG11201809850Q A1	20181228	SG20181109850	20170814
US2019142380 AA	20190516	US20170562384	20170814
WO18035012 A1	20180222	WO2017US46703	20170814

Priority:

US20160375607P 20160816 US20170482440P 20170406 US20170482476P 20170406
US20170520055P 20170615 WO2017US46703 20170814 US20170562384 20170814

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Inventor(s): HSU J ; EMERY D

Agent(s): BALDWIN INTELLECTUAL PROPERTY; RIDOUT AND MAYBEE LLP; WALLINGER RICKER SCHLOTTER TOSTMANN; ALTMAN DANIEL E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 57357019 (US2014257145A)

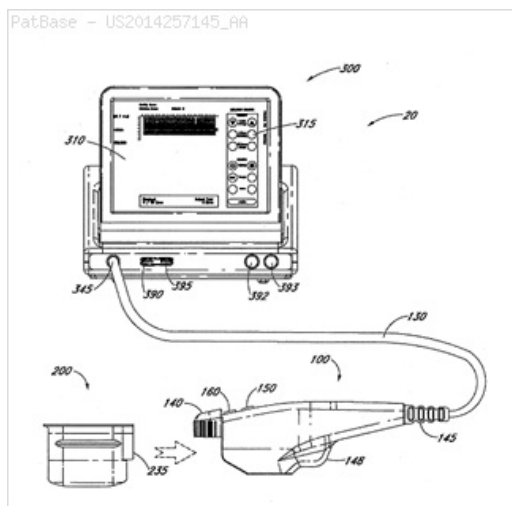
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Title: DEVICES AND METHODS FOR MULTI-FOCUS ULTRASOUND THERAPY

Abstract: Embodiments of a dermatological cosmetic treatment and imaging system and method can include use of transducer to simultaneously or substantially simultaneously produce multiple cosmetic treatment zones in tissue. The system can include a hand wand, a removable transducer module, a control module, and/or graphical user interface. In some embodiments, the cosmetic treatment system may be used in cosmetic procedures, including brow lifts, fat reduction, sweat reduction, and treatment of the décolletage. Skin tightening, lifting and amelioration of wrinkles and stretch marks are provided.

Classifications:

International (IPC 8-9): A61B17/00 A61B18/00 A61B18/04 A61B18/14 A61B19/00 A61B8/00 A61B8/14 A61F7/00 A61M37/00 A61N A61N7/00 A61N7/02 (Advanced/Invention); A61B9/00 (Advanced/Non-invention); A61N7/00 (Core/Invention); A61N (Subclass/Invention)
CPC: A61B2090/378 A61N7/02 A61N2007/0008 A61N2007/0034 A61N2007/0052 A61N2007/0095 A61N2007/027 A61N7/00 A61B17/00 A61B8/4209
US: 601/2



Family:

Publication number	Publication date	Application number	Application date
AU2014226239 AA	20150924	AU20140226239	20140228
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AU2019203187 AA	20190530	AU20190203187	20190507
BR112015020975 A2	20170718	BR20151120975	20140228
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CN104027893 A	20140910	CN201410041501	20140128
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EP2964327 A1	20160113	EP20140760810	20140228
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HK1198016 A1	20150306	HK20140111601	20141117
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IN07903DN2015 A	20160422	IN2015DN07903	20150902
JP2016512451 T2	20160428	JP20150561480T	20140228
JP2018198937 A2	20181220	JP20180124409	20180629
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JP6364030 B2	20180725	JP20150561480T	20140228
JP6655130 B2	20200226	JP20180124409	20180629
KR20150126933 A	20151113	KR20157028062	20140228
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MX2019009155 A1	20191007	MX20190009155	20150820
MX367011 B	20190802	MX20150010778	20140228
PH2015501999 A	20160111	PH20150501999	20150908
SG10201707463U A1	20171030	SG20171007463	20140228
SG11201506925X A1	20150929	SG20151106925	20140228
TH166803 A	20170831	TH20151005022	20140228
TH67964 B	20190205	TH20151005022	20140228
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TW201900117 A	20190101	TW20180134137	20140307
TWI640290 B	20181111	TW20140107971	20140307
US2014257145 AA	20140911	US20140193234	20140228
US2019366127 AA	20191205	US20190541476	20190815
US10420960 BB	20190924	US20140193234	20140228
WO14137835 A1	20140912	WO2014US19633	20140228

Priority:

US20130774785P 20130308	CN201420054999U 20140128	AU20140226239 20140228
JP20150561480T 20140228	JP20180124409 20140228	US20140193234 20140228
WO2014US19633 20140228	TH20151005022 20140228	JP20180124409 20180629
AU20190203187 20190507	US20190541476 20190815	

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 55105020 (US2013296743A)

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Title: ULTRASOUND FOR THERAPY CONTROL OR MONITORING

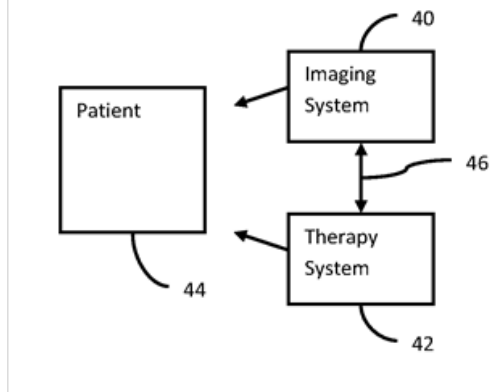
Abstract: Therapy control and/or monitoring is performed with an ultrasound scanner. The ultrasound scanner detects temperature to monitor therapy, and perform HIFU beam location refocusing of the therapy system based on the temperature. The monitoring is synchronized with the therapy using a trigger output of the ultrasound scanner. The trigger output responds to a scan sequence of the ultrasound scanner. To meet a given therapy plan, the scan sequence is customized, resulting in the customized trigger sequence. Three dimensional or multi-planar reconstruction rendering is used to represent temperature for monitoring feedback. The temperature at locations not being treated may be monitored. If the temperature has an undesired characteristic (e.g., too high), then the therapy is controlled by ceasing, at least temporarily.

Classifications:

International (IPC 8-9): A61B18/04 A61B19/00 A61B5/01 A61B8/00 A61N7/00 A61N7/02 (Advanced/Invention)

CPC: A61B5/01 A61B5/4836 A61B8/5223 A61B2018/00791 A61N7/02 A61B2034/101 A61B2090/378 A61N2007/0052 G16H50/30 A61B5/0036

US: 601/3

**Family:**

Publication number	Publication date	Application number	Application date
■ CN103381097 A	20131106	CN201310158078	20130502
■ CN103381097 B	20160518	CN201310158078	20130502
■ DE102013007136 A1	20131107	DE201310007136	20130425
■ FR2990138 A1	20131108	FR20130054004	20130430
■ US2013296743 AA	20131107	US20120462715	20120502

Priority:

US20120462715 20120502

Probable Assignee: SIEMENS MEDICAL SOLUTIONS USA INC

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Inventor(s): (std): DUONG CHRISTOPHE ; FAN LIEXIANG ; HOPPLE JERRY ; HOPPLE JERRY D ; HSU STEPHEN J ; BARNES STEPHEN R ; MALEKE CAROLINE ; SEKINS KEVIN MICHAEL ; KOOK JOHN ; LEE CHI YIN ; ZENG XIAOZHENG ; ZENG XIAOZHENG JENNY

Inventor(s): LIEXIANG FAN ; STEPHEN J HSU ; STEPHEN R BARNES ; XIAOZHENG ZENG ; CAROLINE MALEKE ; CHI YIN LEE ; CHRISTOPHE DUONG ; JERRY HOPPLE ; JOHN KOOK ; KEVIN MICHAEL SEKINS

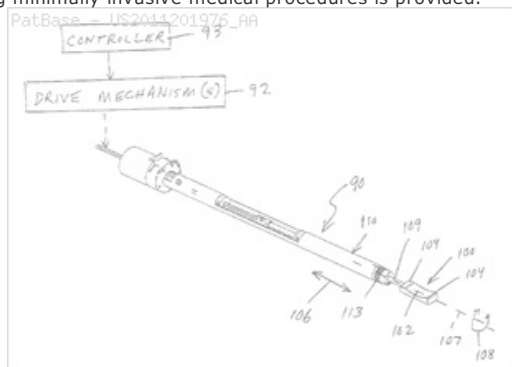
Agent(s): OFFICE ERNEST T FREYLINGER SA

4) Family number: 49411029 (US2011201976A)

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Title: LAPAROSCOPIC HIFU PROBE**Abstract:** A high-intensity focused ultrasound ablation of tissue using minimally invasive medical procedures is provided.**Classifications:****International (IPC 8-9):** A61B8/00 A61B8/14 A61F7/00

A61H1/00 (Advanced/Invention)

CPC: A61B2090/378 A61N7/022 A61N2007/0052 A61N2007/0065**European:** A61N7/02C K61B19/52H14 K61N7/00E K61N7/00L4**US:** 600/439 600/459 601/2 601/2P**Family:**

Publication number	Publication date	Application number	Application date
■ US2011201976 AA	20110818	US20110093030	20110425
■ US8038631 BA	20111018	US20090380810	20090303

Priority:

US20050686499P 20050601

US20060445004 20060601

US20080968714 20080103

US20090380810 20090303

US20110093030 20110425

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Assignee(s): MMV FINANCE INC

Inventor(s): (std): VOIC DAN ; SEIP RALF ; SANGHVI NARENDRA T ; MIKUS PAUL W ; KATNY ARTUR P ; FEDEWA RUSSELL J ; CHEN WO HSING ; CARLSON ROY F

Agent(s): REED SMITH LLP; WILLIAM J

Title: METHOD AND SYSTEM FOR TREATING MUSCLE, TENDON, LIGAMENT AND CARTILAGE TISSUE

Abstract: A method and system for treating subcutaneous tissue with energy such as ultrasound energy is disclosed. In various exemplary embodiments, ultrasound energy is applied at a region of interest to affect tissue by cutting, ablating, micro-ablating, coagulating, or otherwise affecting the subcutaneous tissue to conduct numerous procedures that are traditionally done invasively in a non-invasive manner. Certain exemplary procedures include a brow lift, a blepharoplasty, and treatment of cartilage tissue.

Classifications:

International (IPC 8-9): A61B A61B17/00 A61B17/32 A61B18/04 A61B18/18 A61B5/00 A61B7/02 A61B8/00 A61B8/08 A61B8/13 A61B8/14 A61B9/00 A61N A61N7/00 A61N7/02 (Advanced/Invention); A61B17/00 A61B19/00 A61B5/00 A61B8/08 A61B9/00 A61N7/00 (Advanced/Non-invention); A61B17/00 A61B18/18 A61B8/08 A61N7/00 (Core/Invention); A61B A61N (Subclass/Invention)

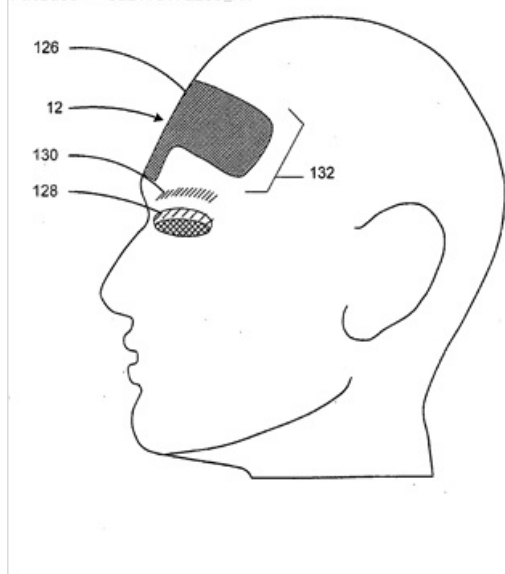
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European: A61B8/08 A61B8/42F2 A61B8/44R A61N7/02

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US: 1/1 600/437 600/439 601/2 601/3 606/27 606/28 606/9 606/9P

PatBase - US2008071255_AA



Family:

Publication number	Publication date	Application number	Application date
DE602007045678 D1	20160519	DE200760045678T	20070919
EP2081646 A1	20090729	EP20070814933	20070919
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US2008071255 AA	20080320	US20070857989	20070919
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US2013211258 AA	20130815	US20130835635	20130315
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WO08036773 A1	20080327	WO2007US78945	20070919

Priority:

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US20050163151	20051006	US20050163148	20051006	US20060826199P	20060919
EP20070814933	20070919	US20070857989	20070919	US20070847989	20070919
WO2007US78945	20070919	US20080028636	20080208	US20090437726	20090508
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US20190697970	20191127				

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Assignee(s): GUIDED THERAPY SYSTEMS LLC MESA

Inventor(s): (std): SLAYTON MICHAEL H ; MAKIN INDER RAJ S ; BARTHE PETER G

Inventor(s): BARTHE PETER G PHOENIX ; MAKIN INDER RAJ S MESA ; SLAYTON MICHAEL H TEMPE

Agent(s): CURLEY DONNACHA JOHN; MAIWALD PATENTANWALTS GMBH; ROEB MARIA; HONG KONG UNITALEN INTELLECTUAL PROPERTY AGENCY LTD; SNELL AND WILMER LLP MAIN; KNOBBE MARTENS OLSON AND BEAR LLP; ASHCRAFT J DAMON

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ

6) Family number: 51594111 (US2012191020A)

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Title: UNIFORM THERMAL TREATMENT OF TISSUE INTERFACES

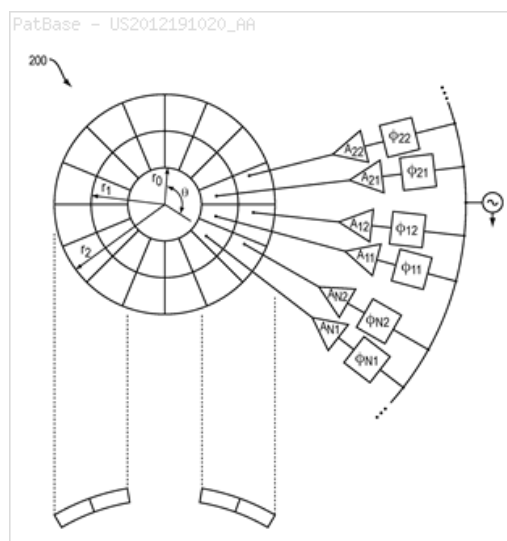
Abstract: Systems and methods for heating a surface substantially uniformly are provided. In various embodiments, the uniform heating is achieved by moving an ultrasound beam across the surface and/or by sequentially irradiating individual meshes of a mesh grid defined over the surface.

Classifications:**International (IPC 8-9):** A61N7/02 (Advanced/Invention)**CPC:** A61N7/02 A61N2007/0065 A61N2007/0078 A61N2007/0095

A61N2007/027

European: A61N7/02 K61N7/00L4 K61N7/00N K61N7/00T4

K61N7/02M

US: 601/3 601/3P**Family:**

Publication number	Publication date	Application number	Application date
US2012191020 AA	20120726	US20110013449	20110125

Priority:

US20110013449 20110125

Probable Assignee: INSIGHTEC LTD**Assignee(s):** (std): PEKELNY YURI ; RACHMILEVITCH ITAY ; VITEK SHUKI**Assignee(s):** INSIGHTEC LTD**Inventor(s):** (std): PEKELNY YURI ; RACHMILEVITCH ITAY ; VITEK SHUKI**7) Family number: 33025196** (US2006111744A)

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Title: METHOD AND SYSTEM FOR TREATMENT OF SWEAT GLANDS

Abstract: A method and system for ultrasound treatment of sweat glands are provided. An exemplary method and system for targeted treatment of sweat glands can be configured in various manners, such as through use of therapy only, therapy and monitoring, imaging and therapy, or therapy, imaging, and monitoring, and/or through use of focused, unfocused, or defocused ultrasound through control of various spatial and temporal parameters. As a result, ablative energy can be deposited at the particular depth at which the aberrant sweat gland population is located below the skin surface.

Classifications:**International (IPC 8-9):** A61B17/32 A61B18/04 A61B8/00

A61M37/00 A61N1/39 A61N7/02 (Advanced/Invention);

A61B18/00 A61N7/00 (Advanced/Non-invention);

A61N1/39 (Core/Invention)

CPC: A61B2018/00005 A61N7/00 A61N2007/0078 A61B8/4281

A61N2007/0004 A61N2007/0052 A61N7/02 A61B2017/320069

European: A61N7/02 K61B18/00A K61N7/00 K61N7/00N**US:** 1/1 600/437 600/439 600/439P 601/3 604/22 604/22S 606/169

606/27 607/1 607/1P

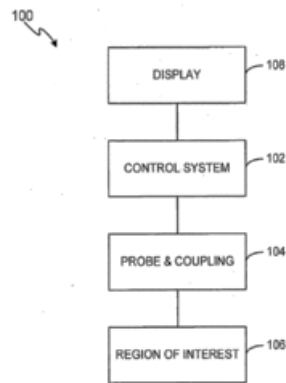


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
US2006111744 AA	20060525	US20050163152	20051006
US2012197120 AA	20120802	US20120444485	20120411
US2012330222 AA	20121227	US20120603159	20120904
US2012330223 AA	20121227	US20120603279	20120904
US2013310863 AA	20131121	US20130950728	20130725
US2015100075 AA	20150409	US20140571835	20141216
US2016354618 AA	20161208	US20160243081	20160822
US2018333595 AA	20181122	US20180049364	20180730
US8282554 BB	20121009	US20120444485	20120411
US8333700 BA	20121218	US20120603159	20120904
US8523775 BB	20130903	US20120603279	20120904
US8932224 BB	20150113	US20130950728	20130725
US9421029 BB	20160823	US20140571835	20141216
US10046181 BB	20180814	US20160243081	20160822

Priority:

US20040616752P	20041006	US20040617752P	20041013	US20050163152	20051006
US20120444485	20120411	US20120603159	20120904	US20120603279	20120904
US20130950728	20130725	US20140571835	20141216	US20160243081	20160822
US20180049364	20180730				

Probable Assignee: GUIDED THERAPY SYSTEMS LLC**Assignee(s):** (std): BARTHE PETER G ; GUIDED THERAPY SYSTEMS L L C ; MAKIN INDER RAJ S ; SLAYTON MICHAEL H ; GUIDED THERAPY SYSTEMS LLC**Inventor(s):** (std): BARTHE PETER G ; MAKIN INDER RAJ ; MAKIN INDER RAJ S ; SLAYTON MICHAEL H**Inventor(s):** BARTHE PETER ; SLAYTON MICHAEL**Agent(s):** SNELL AND WILMER, ONE ARIZONA CENTER; SNELL AND WILMER ONE ARIZONA CENTER; KNOBBE MARTENS OLSON AND BEAR LLP**8) Family number: 30571251 (US2001031922A)**

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Title: ULTRASOUND TRANSDUCERS FOR IMAGING AND THERAPY

Abstract: Ultrasound applicators able to both image a treatment site and administer ultrasound therapy include an array of transducer elements that can be focused. In several embodiments, an electronically phased array is used for controlling the focal point of an ultrasound beam. The ultrasound beam produced thereby can also be electronically steered. To reduce the quality factor or Q of the array when the array is used for imaging, an electronic switch is selectively closed, placing a resistance in parallel with each of the array elements. A flexible array is employed in several embodiments and is selectively bent or flexed to vary its radius of curvature and thus control the focal point and/or a direction of focus of the array. In another embodiment, each of the transducer elements comprising the array are individually mechanically pivotable to steer the ultrasonic beam produced by the transducer elements.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/12 A61B17/22
A61B17/225 A61B18/00 A61B18/04 A61B19/00 A61B5/00 A61B5/05
A61B8/00 A61B8/12 A61B8/13 A61H1/00 A61H23/02 A61N7/00
A61N7/02 G10K11/26 G10K11/32 G10K11/34 G10K9/12 G10K9/125
H04R17/00 (Advanced/Invention);
A61B17/12 A61B17/22 A61B17/225 A61B18/00 A61B19/00
A61B8/00 A61B8/12 H04R17/00 (Advanced/Non-invention);
A61B17/00 A61B17/22 A61B17/225 A61B18/00 A61B18/04
A61B19/00 A61B8/00 A61B8/12 A61H1/00 A61H23/02 A61N7/00
G10K11/00 H04R17/00 (Core/Invention);

A61B19/00 (Core/Non-invention);

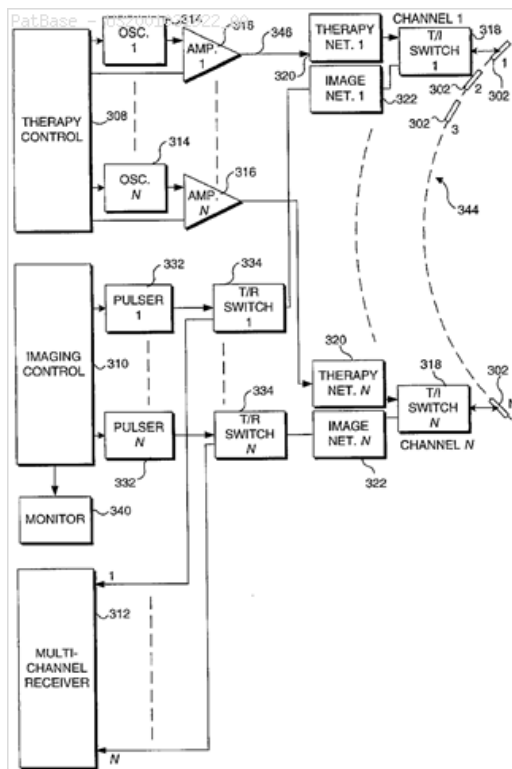
A61M (Subclass/Invention)

International (IPC 1-7): A61B17/00 A61B17/12 A61B17/22
A61B18/00 A61B18/04 A61B19/00 A61B8/00 A61B8/12 A61H1/00
A61H5/00 A61M A61N7/02 H04R17/00

CPC: A61B8/445 A61B8/4461 A61B8/12 A61H23/0245
A61N2007/0052 A61N2007/0065 A61N2007/0078 A61B2090/062
A61B2090/378 A61B2090/3904 A61B2090/3937 A61N7/022
A61B17/22012 A61B17/0057 A61B2017/00504 A61B2017/00641
A61B2017/00907 A61B2562/164 A61N7/02 G10K11/32 G10K11/346
A61B8/4422

European: A61B17/00P A61B17/22B2 A61B8/12 A61B8/44H
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K61B19/46D K61B19/52H14 K61B19/54B K61B19/54J K61B562/16D
K61N7/00E K61N7/00L4 K61N7/00N

US: 310/336 370/352P 370/401S 600/407 600/424 600/424P
600/427 600/437 600/439 600/439P 600/439S 600/443 600/444
600/447 600/447S 600/448 600/454 600/459 600/459S 600/462
601/2 601/2P 601/2S 601/3 601/3P 601/3S 606/27 606/27P



Family:

Publication number	Publication date	Application number	Application date
AU200125982 A1	20010703	AU20010025982	20001222
AU200125982 A5	20010703	AU20010025982	20001222
AU200126193 A1	20010606	AU20010026193	20001025
AU200126193 A5	20010606	AU20010026193D	20001025
CA2387127 AA	20020404	CA20002387127	20001025
CA2394892 AA	20020620	CA20002394892	20001222
EP1229839 A2	20020814	EP20000989717	20001025
EP1229839 A4	20051207	EP20000989717	20001025
EP1241994 A2	20020925	EP20000989483	20001222
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JP2003513691 T2	20030415	JP20010536034T	20001025
JP2004512856 T2	20040430	JP20010546292T	20001222
US2001031922 AA	20011018	US20000747310	20001222
US2004106880 AA	20040603	US20030616831	20030710
US2005096542 AA	20050505	US20040780405	20040217
US2005240170 AA	20051027	US20030671417	20030924
US2006235300 AA	20061019	US20060471052	20060619
US2007179379 AA	20070802	US20070619996	20070104
US2009062697 AA	20090305	US20080202195	20080829
US2011021913 AA	20110127	US20100896740	20101001
US2011118602 AA	20110519	US20110011533	20110121
US2011178403 AA	20110721	US20110025959	20110211
US2011178445 AA	20110721	US20110026108	20110211
US2012059258 AA	20120308	US20110245689	20110926
US2012108966 AA	20120503	US20120344418	20120105
US2012108967 AA	20120503	US20120346466	20120109
US6656136 BA	20031202	US20000696076	20001025
US6719694 BB	20040413	US20000747310	20001222
US7063666 BB	20060620	US20040780405	20040217
US8137274 BB	20120320	US20110025959	20110211
US8277398 BB	20121002	US20110026108	20110211
US8388535 BB	20130305	US20110011533	20110121
WO0134018 A2	20010517	WO2000US41606	20001025
WO0134018 A3	20020110	WO2000US41606	20001025
WO0145550 A2	20010628	WO2000US35262	20001222
WO0145550 A3	20011213	WO2000US35262	20001222
WO0145550 B1	20020530	WO2000US35262	20001222
WO05030295 A2	20050407	WO2004US31506	20040923
WO05030295 A3	20070726	WO2004US31506	20040923

Priority:

US19990163466P	19991025	US19990171703P	19991223	US19990171703P	19991223
US20000696076	20001025	WO2000US41606	20001025	US20000747310	20001222
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US20110245689	20110926	US20120344418	20120105	US20120346466	20120109

Probable Assignee: KONA MEDICAL INC

Assignee(s): (std): PEROZEK DAVID M ; THERUS CORP ; THERUS CORP LEGAL ; WENG LEE ; ZHANG JIMIN ; ZHANG JIMLIN ; KONA MEDICAL INC

Assignee(s): OTSUKA MEDICAL DEVICES CO LTD ; PEROZEK DAVID ; THERUS CORPORTION ; THERUS LEGAL CORP

Inventor(s): (std): PEROZEK DAVID M ; WENG LEE ; ZHANG JIMIN ; ZHANG JIMLIN ; PEROZEK DAVID ; EICHINGER JOSEPH

Inventor(s): DAVID M PEROZEK ; DAVID PEROZEK ; JIMIN ZHANG ; JOSEPH EICHINGER ; LEE WENG

Agent(s): SMART AND BIGGAR; KNOBBE MARTENS OLSON AND BEAR LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

9) Family number: 32715336 (US2006058707A)

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Title: METHOD AND SYSTEM FOR ULTRASOUND TREATMENT WITH A MULTI-DIRECTIONAL TRANSDUCER

Abstract: A method and system for ultrasound treatment utilizing a multi-directional transducer to facilitate treatment, such as therapy and/or imaging or other tissue parameter monitoring, in two or more directions. In accordance with an exemplary embodiment, a multi-directional transducer comprises a transduction element configured to provide for ultrasound energy, such as radiation, acoustical energy, heat energy, imaging, positional information and/or tissue parameter monitoring signals in two or more directions. The transduction element can comprise various materials for providing ultrasound energy or radiation, such as piezoelectric materials, with and without matching layers. In addition, the transduction element can be configured for substantially uniform, focused and/or defocused radiation patterns, as well as for single, multiple-element and/or multiple-element array configurations. In addition, an exemplary multi-directional transducer can comprise multiple elements, either side by side, stacked or in an array.

Classifications:

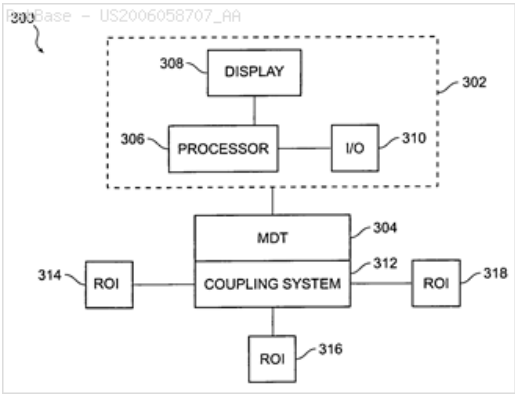
International (IPC 8-9): A61B8/00 A61H1/00 A61N7/00 A61N7/02 (Advanced/Invention); A61B17/00 A61B19/00 A61N7/00 (Advanced/Non-invention); A61B8/00 A61H1/00 A61N7/00 (Core/Invention)

International (IPC 1-7): A61N7/02

CPC: A61N7/022 A61B2017/00084 A61N2007/0078 A61B8/4272 A61B2090/378

European: A61N7/02C K61B17/00C1T K61B19/52H14 K61N7/00N

US: 1/1 600/437 600/439 600/439P 600/444 600/447 600/459 600/462 600/466 600/467 600/470 600/472 601/2 601/2P 601/2S 601/3 601/4



Family:

Publication number	Publication date	Application number	Application date
US2006058707 AA	20060316	US20040944499	20040916
US2008275342 AA	20081106	US20080135962	20080609
US2012059288 AA	20120308	US20110294004	20111110
US7393325 BB	20080701	US20040944499	20040916
US8057389 BB	20111115	US20080135962	20080609
US9114247 BB	20150825	US20110294004	20111110
WO06034000 A1	20060330	WO2005US33046	20050916

Priority:

US20040944499 20040916 US20080135962 20080609 US20110294004 20111110

Probable Assignee: GUIDED THERAPY SYSTEMS LLC

Assignee(s): (std): GUIDED THERAPY SYSTEMS L L C ; GUIDED THERAPY SYSTEMS LLC ; SLAYTON MICHAEL H ; GUIDED THERAPY SYSTEMS INC ; BARTHE PETER G

Assignee(s): ARDENT SOUND INC

Inventor(s): (std): BARTHE PETER G ; SLAYTON MICHAEL H

Inventor(s): BARTHE PETER ; SLAYTON MICHAEL

Agent(s): SNELL AND WILMER, ONE ARIZONA CENTER; SNELL AND WILMER ONE ARIZONA CENTER; SNELL AND WILMER LLP MAIN; SNELL AND WILMER LLP; QUARLES AND BRADY LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

10) Family number: 34033416 (US2007016039A)

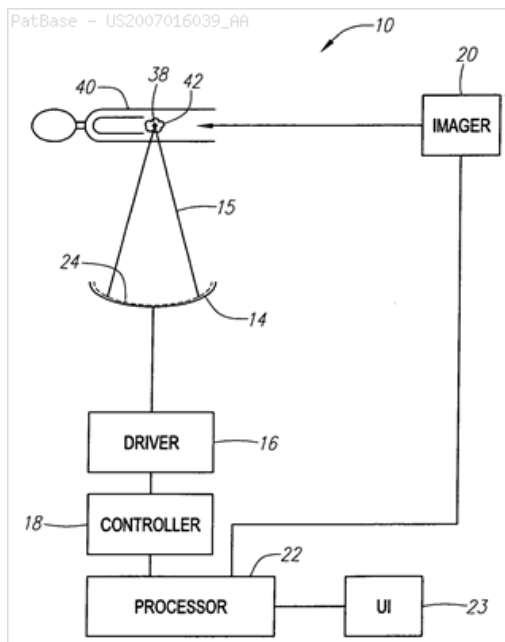
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Title: CONTROLLED, NON-LINEAR FOCUSED ULTRASOUND TREATMENT

Abstract: A system for treating tissue within a body is configured to deliver a first level of ultrasound energy to a target tissue region for a first duration resulting in the generation of microbubbles in the target tissue region, determine one or more characteristics of the target tissue region in the presence of the microbubbles, and deliver a second level of ultrasound energy to the target tissue region for a second duration, wherein one or both of the second energy level and the second duration are based, at least in part, on the determined one or more characteristics of the target tissue region.

Classifications:

International (IPC 8-9): A61B17/22 A61B8/00 A61H1/00 A61N7/02 (Advanced/Invention); A61B17/22 A61B8/08 A61B90/00 (Advanced/Non-invention); A61B17/22 A61B8/00 A61N7/00 (Core/Invention)
CPC: A61N7/02 A61B8/467 A61B8/481 A61B90/37 A61B2017/22008 A61B2090/374 A61B2090/376 A61B2090/378
European: A61B17/22B A61B8/46D A61N7/02 K61B17/22B1C2 K61B19/52H K61B19/52H10 K61B19/52H14 K61B19/52H8 K61B8/48B
US: 600/439 600/439P 601/2 601/2S 601/3 601/3P



Family:

Publication number	Publication date	Application number	Application date
■ CN101242872 A	20080813	CN200680029730	20060619
■ US2007016039 AA	20070118	US20050158657	20050621
■ US2010241036 AA	20100923	US20060993443	20060619
■ US10130828 BB	20181120	US20060993443	20060619
■ WO06136912 A1	20061228	WO2006IB01641	20060619

Priority:

US20050158657 20050621 US20060993443 20060619 WO2006IB01641 20060619

Probable Assignee: INSIGHTEC LTD

Assignee(s): (std): FREUNDLICH DAVID ; INSIGHTEC IMAGE GUIDED TREAT ; INSIGHTEC IMAGE GUIDED TREAT L ; VITEK SHUKI ; VORTMAN KOB I ; INSIGHTEC LTD

Assignee(s): INSIGHTEC IMAGE GUIDED TREATMENT LTD

Inventor(s): (std): DAVID FREUNDLICH ; FREUNDLICH DAVID ; KOB I VORTMAN ; SHUKI VITEK ; VITEK SHUKI ; VORTMAN KOB I

Agent(s): VISTA IP LAW GROUP LLP; GOODWIN PROCTER LLP,PATENT ADMINISTRATOR; GOODWIN PROCTER LLP PATENT ADMINISTRATOR; MORGAN LEWIS AND BOCKIUS LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 33059459 (US2006122509A)

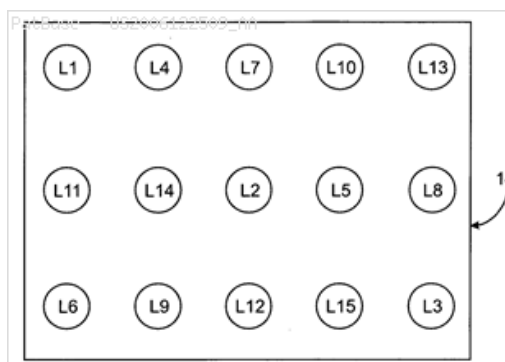
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Title: SYSTEM AND METHODS FOR DESTROYING ADIPOSE TISSUE

Abstract: Methods and systems for the destruction of adipose tissue are disclosed. A method is provided for creating a surface map corresponding to a volume of adipose tissue for noninvasive treatment, and additional methods are provided for the treatment of the adipose tissue.

Classifications:

International (IPC 8-9): A61B8/12 A61H1/00 A61M1/00 A61N7/00 (Advanced/Invention); A61B8/12 A61H1/00 A61M1/00 (Core/Invention)
CPC: A61M2202/08 A61N7/02 A61N2007/0008
European: A61N7/02 K61M202/08 K61N7/00A2
US: 600/439 601/2 601/2P 604/542



Family:

Publication number	Publication date	Application number	Application date
■ US2006122509 AA	20060608	US20050286042	20051123
■ US2009318837 AA	20091224	US20090545033	20090820
■ US2011178443 AA	20110721	US20110073826	20110328

Priority:

Probable Assignee: LIPOSONIX INC**Assignee(s):** (std): LIPOSONIX INC ; MEDICIS TECHNOLOGIES CORP**Assignee(s):** CAPITAL ROYALTY PARTNERS II LP ; CAPITAL ROYALTY PARTNERS II PARALLEL FUND A LP ; PARALLEL INVESTMENT OPPORTUNITIES PARTNERS II LP ; SILICON VALLEY BANK**Inventor(s):** (std): DESILETS CHARLES S**Inventor(s):** DESILETS CHARLES**Agent(s):** TOWNSEND AND TOWNSEND AND CREW LLP; TOWNSEND AND TOWNSEND AND CREW LLP LIPOSONIX INC 70353**12) Family number: 33174476** (US2009054772A)

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Title: FOCUSED ULTRASOUND THERAPY SYSTEM

Abstract: The present invention pertains to an ultrasound therapy system and more specifically, to a high-intensity focused ultrasound (HIFU) therapy apparatus guided by image registration and fusion method. The therapy system of the present invention comprises a central control means; an acoustic energy applicator; a mechanical driving and locating means of said acoustic energy applicator; a real-time B-mode ultrasound image guiding device. Further the therapy system of the present invention comprises an immobilization means for body position. By the help of this immobilization means for body position, real-time B-mode ultrasound images can be registered with diagnosis images, and then on the basis of registration, said B-mode ultrasound images are fused with said diagnosis images for guiding said therapy. Comparing to the existed technical solutions in this field, the present invention has effectively solved the difficult problems in high-intensity focused ultrasound therapy and particularly for tumor treatment with a low cost. And it provides a very practical technical solution, which can be easily applied to clinical treatment of tumors.

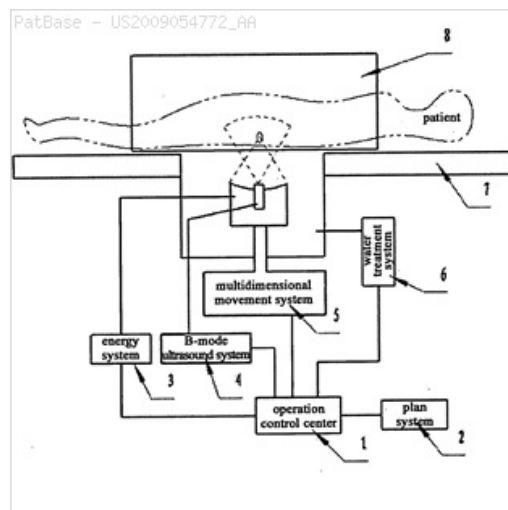
Classifications:

International (IPC 8-9): A61B17/22 A61B18/00 A61B5/055
A61B8/00 A61B8/14 A61N7/00 A61N7/02 (Advanced/Invention);
A61B17/22 A61B18/00 A61B5/055 A61B8/00 A61B8/14
A61N7/00 (Core/Invention)

CPC: A61B90/14 A61B2090/378 A61N7/02

European: A61N7/02 K61B19/20D K61B19/52H14

US: 600/439 600/439P

**Family:**

Publication number	Publication date	Application number	Application date
AT445440 E	20091015	AT20050781862T	20050826
AU2005326351 AA	20060803	AU20050326351	20050826
AU2005326351 BB	20071122	AU20050326351	20050826
BRPI0519801 A2	20090512	BR2005PI19801	20050826
CA2593127 AA	20070731	CA20052593127	20050826
CA2593127 C	20091208	CA20052593127	20050826
CN1814323 A	20060809	CN200510004980	20050131
CN1814323 B	20100512	CN200510004980	20050131
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KR100972708 B1	20100727	KR20077019857	20050826
KR20070107089 A	20071106	KR20077019857	20050826
RU2007131728 A	20090310	RU20070131728	20050826
RU2366475 C2	20090910	RU20070131728	20050826
US2009054772 AA	20090226	US20050883097	20050826
WO06079265 A1	20060803	WO2005CN01328	20050826

Priority:

CN200510004980 20050131 WO2005CN01328 20050826

Probable Assignee: CHONGQING HAIFU MEDICAL TECHNOLOGY CO LTD**Assignee(s):** (std): CHONGQING HAIFU HIFU TECH CO ; WEN YINGANG ; WANG ZHILONG ; WANG ZHIBIAO ; LIN TAO ; CHONGTSING KHAJFU KHIFU TEKNOLO ; HAIFU HIFU TECHNOLOGY CO LTD C ; CHEN WENZHI

Assignee(s): HAIFU TECHNOLOGY CO LTD ; HAIFU HIFU TECHNOLOGY CO LTD CHONGQING ; CHONGQING HAIFUTECHNOLOGY CO LTD ; CHONGQING HAIFU MEDICAL TECHNOLOGY CO LTD ; CHONGQING HAIFU (HIFU) TECHNOLOGY CO LTD ; CHONGTSING KHAJFU KHIFU TEKNOLODZHI KO ; CHONGQING HAIFU HIFU TECHNOLOGY CO ; CHONGQING HAIFU HIFU TECHNOLOGY CO LTD ; CHONGQING HAIFU (HIFU) TECHNOLOGY CO LTD ; CHONGTSING KHAJFU KHIFU TEKNOLODZHI KO LTD ; HAIFU HIFU TECHNOLOGY CO

Inventor(s): (std): CHEN WENZHI ; LIN TAO ; WANG ZHIBAO ; WANG ZHIBIAO ; WANG ZHILONG ; WEN YINGANG ;

ZHILONG WANG ; ZHIBIAO WANG ; YINGANG WEN ; WENZHI CHEN ; UEHN IJNGEHN ; UANG ZHILONG ; UANG ZHIBIAO ; TAO LIN ; LIN TAO CHEN ; CHEN UEHNZHI

Inventor(s):

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Agent(s):

CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; GOWLING LAFLEUR HENDERSON LLP; KAMPFENKEL KLAUS; WEBB LAW FIRM PC

Designated states:

AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

13) Family number: 58175510 (US2016151618A)

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Title: TRANSDUCER PLACEMENT AND REGISTRATION FOR IMAGE-GUIDED SONOTHROMBOLYSIS

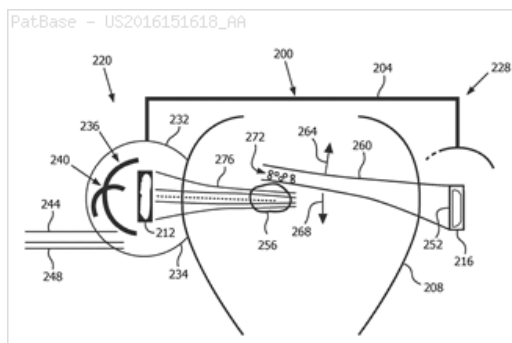
Abstract: An apparatus for ultrasound irradiation of a body part (208) includes a first ultrasound transducer (216), and a second ultrasound transducer (212) mounted oppositely, and is configured: a) such that at least two ultrasound receiving elements, for determining a relative orientation of the first to the second transducer, are attached to the first transducer; b) for a beam, from the first transducer, causing cavitation, and/or bubble destruction of systemically circulating microbubbles, within the body part; or c) both with the attached elements and for the causing. The apparatus registers, with said first transducer, the second transducer, by using as a reference respectively the features a) and/or b). A detachable subsystem includes either a therapy or imaging transducer, to form a combination imaging and therapy system, the subsystem being configured for removable coupling to correspondingly an imaging or therapy subsystem comprising a head frame (204) to which is mounted an imaging or therapy transducer, the imaging or therapy subsystem for registering the imaging or therapy transducer, one to the other, by the above method.

Classifications:

International (IPC 8-9): A61B17/00 A61B19/00 A61B34/20 A61B8/00 A61B8/08 A61B8/14 A61B90/00 A61M37/00 A61N7/00 A61N7/02 (Advanced/Invention); A61B19/00 A61N7/00 (Advanced/Non-invention)

CPC: A61B8/06 A61B8/0816 A61B8/085 A61B8/4209 A61B8/4254 A61B8/4483 A61B8/461 A61B8/481 A61B8/5238 A61B2034/2063 A61B2090/378 A61N2007/0039 A61M37/0092 A61N2007/0052 A61N7/00

US: 600/439



Family:

Publication number	Publication date	Application number	Application date
■ CN105407969 A	20160316	CN201480037197	20140625
■ CN105407969 B	20190405	CN201480037197	20140625
■ EP3013421 A2	20160504	EP20140742361	20140625
■ EP3013421 B1	20200226	EP20140742361	20140625
■ EP3013421 B8	20200408	EP20140742361	20140625
■ IN201647002720 A	20160831	IN201647002720	20160125
■ JP2016526980 T2	20160908	JP20160522927T	20140625
■ JP6450752 B2	20190109	JP20160522927T	20140625
■ US2016151618 AA	20160602	US20140901293	20140625
■ WO14207665 A2	20141231	WO2014IB62578	20140625
■ WO14207665 A3	20150409	WO2014IB62578	20140625

Priority:

US20130840752P 20130628 US20140901293 20140625 WO2014IB62578 20140625

Probable Assignee: PHILIPS KONINKLL NV

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Agent(s): GRAVENDEEL CORNELIS; PHILIPS INTELLECTUAL PROPERTY AND STANDARDS; OHNUKI SHINSUKE; ITOH TADAHIKO; ITOH TADASHIGE; STEFFEN THOMAS ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

14) Family number: 32840558 (US2006089632A)

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Title: METHOD AND SYSTEM FOR TREATING ACNE AND SEBACEOUS GLANDS

Abstract: A method and system for ultrasound treatment of acne and sebaceous glands are provided. An exemplary method and system are configured for targeted treatment of sebaceous glands in various manners, such as through use of therapy only, therapy and monitoring, imaging and therapy, or therapy, imaging, and monitoring, and/or through use of focused, unfocused, or defocused ultrasound at various spatial and temporal energy settings. An exemplary method and system can be configured to produce regions of heating and damage by destroying the function of sebaceous glands within a user-specified treatment layer depth associated with the glands to be treated. In addition, an exemplary method and system can be configured to produce regions of heating and damage within the treatment layer in spatially defined patterns, rather than heating and destroying the entire volume of the target layer of tissue. Further, an exemplary method and system can be configured to specifically aim such regions of heating and damage within the treatment layer, to occur at the same location as the secretory portion of sebaceous glands.

Classifications:

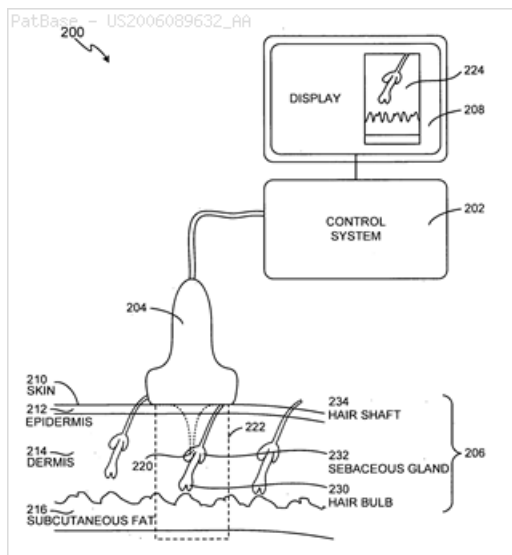
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CPC: A61B2018/00047 A61N2007/0069 A61N2007/0073

A61B2017/00106 A61B2017/00769 A61B2018/00577 A61N2007/006 A61N2007/0065 A61H2201/0207 A61H2201/0214 A61H2201/1685 A61H2201/5005 A61H2201/5015 A61H2201/5046 A61H2201/5058 A61H2201/5082 A61H2201/5092 A61H2230/505 A61H2230/655 A61B8/54 A61B8/4427 A61B2018/00791 A61N2007/0086 A61B34/10 A61B8/4272 A61B8/56 A61B2018/00023 A61N2007/0082 A61N2007/0091 A61N2007/0095 A61B8/4466 A61B7/02 A61N2007/0078 A61B8/085 A61B8/4494 A61B8/4444 A61H2230/50 G01S15/899 A45D44/005 A45D2019/0033 A45D2044/007 A45D2200/207 A61B5/441 A61B5/6843 A61B8/4254 A61B8/429 A61B8/4411 A61B8/4438 A61B8/4461 A61B8/4472 A61B8/465 A61B8/467 A61B8/468 A61B8/469 A61B2090/378 G10K11/352 A61B8/00 A61B5/00 A61B18/14 A61B5/682 A61B5/6842 A61B8/08 A61B8/0858 A61B8/12 A61B8/4209 A61B8/4281 A61B8/4455 A61B8/4483 A61B8/483 A61B8/546 A61B2017/320069 A61H23/0245 A61H2201/5007 A61N7/00 A61N7/02 A61N2007/0008 G01S15/8909 A61N2007/0034 A61B8/13 A61B8/461 A61N2007/0052 A61N2007/027 A61B17/320068 A61B2017/320089

European: A45D44/00S A61B5/68B2B5 A61B5/68B4D A61B8/08 A61B8/08J A61B8/12 A61B8/44M A61B8/44N4 A61B8/44N6 A61B8/44R A61B8/48D A61B8/54D A61H23/02P A61N7/00 A61N7/02 G01S15/89D1 K45D19/00S K45D200/20F K45D44/00T K61B17/00C1U K61B17/00R2T K61B18/00G1 K61B19/50 K61B19/52H14 K61B5/44B K61B5/68B5 K61B8/42B K61B8/42D2 K61B8/42F2 K61B8/42F4 K61B8/44N4 K61B8/44N8 K61H201/50C K61H230/50 K61N7/00A12 K61N7/00A2 K61N7/00E K61N7/00L2 K61N7/00L4 K61N7/00N K61N7/00S K61N7/00T2 S01S15/89D8

US: 1/1 600/437 600/439 600/439P 600/459 600/459P 601/2 601/2S 601/3 601/3P 606/169 606/27 606/27P



Family:

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Probable Assignee: GUIDED THERAPY SYSTEMS LLC

Assignee(s): (std): BARTHE PETER G ; GUIDED THERAPY SYSTEM ; GUIDED THERAPY SYSTEM LLC ; GUIDED THERAPY SYSTEMS L L C ; GUIDED THERAPY SYSTEMS LLC ; MAKIN INDER RAJ S ; O CONNOR BRIAN D ; SLAYTON MICHAEL H ; UL TERA INK ; ULTERA INK ; ULTERA INC

Assignee(s): ULTHERA INC MESA ; ULTHERA ; GUIDED THERAPY SYSTEMS LLC MESA ; GUIDED THERAPY SYSTEMS LLC33 SOUTH SYCAMORE STREETMESAAZ85202-1101US ; GUIDEDTHERAPY SYSTEMS ; GUIDED THERAPY SYSTEMS

Inventor(s): (std): BART PITER G ; BARTHE PETER ; BARTHE PETER G ; BARTHE PETER G PG ; EMERY CHARLES D ; H MICHAEL SLAYTON ; INDER RAJ S MAKIN ; MAKIN INDER ; MAKIN INDER RADZH S ; MAKIN INDER RAJ S ; MAKIN INDER RAJ S IS ; BRIAN D O CONNOR ; MICHAEL H SLAYTON ; O CONNOR BRIAN D ; PETER G BARTHE ; S RAJ INDER MAKIN ; SLAYTON MICHAEL ; SLAYTON MICHAEL H ; SLAYTON MICHAEL H MH ; OCONNOR BRIAN D ; SLEHTON MAJKL KH ; SLEJTON MAJKL KH

Inventor(s): PETER G ; SLAYTON MICHAEL H TEMPE ; SLAYTON MICHAEL HUS ; O CONNOR BRIAN D PALM CITY ; O CONNOR BRIAN D PHOENIX ; O CONNOR BRIAN DUS ; O CONNOR BRIAN ; BRIAN D OCONNOR ; MAKIN INDER RAJ S MESA ; MAKIN INDER RAJ SUS ; MAKIN INDER RAJ ; BARTHE PETER G PHOENIX ; BARTHE PETER GUS

Agent(s): FB RICE PTY LTD; FB RICE; BLAKE CASSELS AND GRAYDON LLP; OGILVY RENAULT LLP SENCRL SRL; STOLMAR AND PARTNER PATENTANWALTE PARTG MBB; WALLINGER RICKER SCHLOTTER TOSTMANN PATENT U RECHTSANWALTE PARTNERSCHAFT MBB; RICKER MATHIAS; CURLEY DONNACHA JOHN ET AL; BRAND THOMAS LOUIS; CURLEY DONNACHA JOHN; WALLINGER RICKER SCHLOTTER TOSTMANN; KIRCHNER CHRISTIAN; LINAGE RAFAEL; DE ELZABURU ALBERTO; ELZABURU SLP ELZABURU SLP; CHINA PATENT AGENT HK LTD; INSIGHT INTELLECTUAL PROPERTY LTD; INSIGHT HK INTELLECTUAL PROPERTY LTD; ELLA CHEONG HONG KONG LTD; REINHOLD COHN AND PARTNERS; S HOROWITZ AND CO; TANAKA JUNYA; TACHIBANA KENJI; PATENTIKA; ELISAVET YAKOVIDIS CINLEMEZ; AYLIN SENER; SNELL AND WILMER ONE ARIZONA CENTER; SNELL AND WILMER, ONE ARIZONA CENTER; SNELL AND WILMER; SNELL AND WILMER LLP MAIN; SNELL AND WILMER LLP; KNOBBE MARTENS OLSON AND BEAR LLP; KNOBBE MARTENS OLSON AND BEAR; DELANEY KAROLINE A; ALTMAN DANIEL E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR

15) Family number: 32818593 (US2006074313A)

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Title: METHOD AND SYSTEM FOR TREATING CELLULITE

Abstract: A method and system for providing ultrasound treatment to a deep tissue that contains a lower part of dermis and proximal protrusions of fat lobuli into the dermis. The invention delivers ultrasound energy to the region creating a thermal injury and coagulating the proximal protrusions of fat lobuli, whereby eliminating the fat protrusions into the dermis. The invention can also include ultrasound imaging configurations using the same or a separate probe before, after or during the treatment. In addition various therapeutic levels of ultrasound can be used to increase the speed at which fat metabolizes. Additionally the mechanical action of ultrasound physically breaks fat cell clusters and stretches the fibrous bonds. Mechanical action will also enhance lymphatic drainage, stimulating the evacuation of fat decay products.

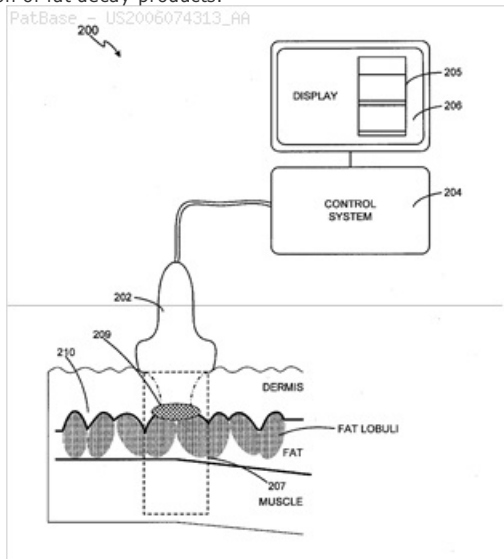
Classifications:

International (IPC 8-9): A61B A61B18/00 A61B18/04 A61B18/12 A61B18/18 A61B18/20 A61B19/00 A61B34/20 A61B5/00 A61B8/00 A61B8/08 A61B8/12 A61B8/13 A61B8/14 A61F7/00 A61H1/00 A61H23/02 A61H7/00 A61M37/00 A61N A61N7/00 A61N7/02 B06B1/06 G01S15/89 G01S7/52 (Advanced/Invention); A61B10/00 A61B18/00 A61B18/04 A61B19/00 A61B8/00 A61B8/08 A61B8/13 A61B8/14 A61B90/00 A61H7/00 A61N7/00 A61N7/02 (Advanced/Non-invention); A61B18/00 A61B18/04 A61B18/18 A61B18/20 A61B8/00 A61B8/08 A61B8/12 A61B8/13 A61B8/14 A61H1/00 A61N7/00 (Core/Invention); A61B10/00 (Core/Non-invention); A61B A61N (Subclass/Invention)

CPC: G01S7/52046 A61B18/18 A61B8/0825 A61B2018/00904 A61B2018/00333 A61B2018/00642 A61B2018/00791 A61B2018/00994 B06B1/0607 A61N2007/027 A61B18/04 H05K999/99 A61B18/12 A61B18/20 A61B18/203 A61B34/20 A61B2017/00221 A61B2017/00734 A61B2018/00291 A61B2018/00464 A61B2018/00577 A61B2018/1807 A61B2090/065 A61M37/0092 A61N5/02 A61N5/06 G16H50/30 G01S15/8936 A61B5/4869 A61B2090/378 B06B1/0622 G01S7/5208 G01S15/8906 G01S15/899 G01S15/8993 A61N7/00 A61B8/0858 A61B8/14 A61B8/4281 A61B8/429 A61B8/4444 A61B8/4455 A61B8/4483 A61B8/461 A61B8/483 A61B8/5223 A61B8/54 A61H23/0245 A61H2201/0214 A61H2201/5064 A61H2201/5082 A61H2207/00 A61N7/02 A61N2007/0008 A61N2007/0034 A61N2007/0052 A61N2007/0056 A61N2007/0073 A61N2007/0078 G01S15/8909

European: A61B5/48W A61B8/13 A61B8/14 A61B8/44R A61B8/48D A61H23/02P A61N7/02 B06B1/06C3 G01S15/89D G01S15/89D1 G01S15/89D8 G01S15/89D9 G01S7/52S13B G01S7/52S4 K61B19/52H14 K61B8/08J K61B8/14 K61B8/44N4 K61B8/52D2 K61H201/02L K61H201/50S14 K61H201/50S4 K61N7/00A2 K61N7/00E K61N7/00L K61N7/00M K61N7/00N

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Probable Assignee: GUIDED THERAPY SYSTEMS LLC

Assignee(s): (std): GUIDED THERAPY SYSTEMS L L C ; MAKIN INDER RAJ S ; SLAYTON MICHAEL H ; GUIDED THERAPY SYSTEMS LLC ; GUIDED THERAPY SYSTEMS INC ; BARTHE PETER G

Assignee(s): GEN Y CREATIONS LLC

Inventor(s): (std): MAKIN INDER RAJ S ; SLAYTON MICHAEL ; SLAYTON MICHAEL H ; MAKIN INDER ; BARTHE PETER G

Inventor(s): MAKIN INDER RAJ ; BARTHE PETER

Agent(s): BLAKE CASSELS AND GRAYDON LLP; CURLEY DONNACHA JOHN ET AL; CURLEY DONNACHA JOHN; MAIWALD PATENT U RECHTSANWALTSGESELLSCHAFT MBH; MARIA ROEB DIAZ ALVAREZ; CHINA PATENT AGENT HK LTD; REINHOLD COHN AND PARTNERS; SNELL AND WILMER, ONE ARIZONA CENTER; SNELL AND WILMER ONE ARIZONA CENTER; SNELL AND WILMER LLP MAIN; SNELL AND WILMER LLP; KNOBBE MARTENS OLSON AND BEAR LLP; OLSON AND BEAR LLP; MARTENS KNOBBE; FRALEY R LEE

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

16) Family number: 57226631 (WO14127091A1)

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Title: TRANSCRANIAL ULTRASOUND SYSTEMS

Abstract: Apparatuses for transcranial ultrasound neuromodulation. Described herein are apparatuses for transcranial ultrasound neuromodulation that are self-contained, self-powered, self-adhering, and self-coupling and referred to as transcranial ultrasound neuromodulation pucks, which may be disposable and semi-disposable. These apparatuses may include one or more controls to confirm their position on the subject's head, e.g., using acoustic impedance. These transcranial ultrasound neuromodulation devices may be wireless controlled, and may be configured specifically to conform to the subject's head. The transcranial ultrasound neuromodulation systems described herein are advantageous for achieving neuromodulation to affect learning and memory, attention, creativity, decision-making, and other cognitive states.

Classifications:

International (IPC 8-9): A61B8/06 (Advanced/Invention)
CPC: A61B8/4236 A61B8/4254 A61B8/429 A61B8/4416 A61B8/4427 A61B8/4455 A61B8/4472 A61B2017/00044 A61B2017/00734 A61N2007/003 A61N2007/0078 A61N7/02 A61B2090/065



Family:

Publication number	Publication date	Application number	Application date
WO14127091 A1	20140821	WO2014US16178	20140213

Priority:

US20130764759P 20130214

Probable Assignee: THYNC INC

Assignee(s): (std): THYNC INC

Inventor(s): (std): GOLDWASSER ISY ; PAL SUMON K ; SATO TOMOKAZU ; TYLER WILLIAM J ; WETMORE DANIEL Z ; COOK STEVEN ; CHARLESWORTH JONATHAN

Agent(s): SHOOP RICHARD D ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 23547637 (US2002143252A)

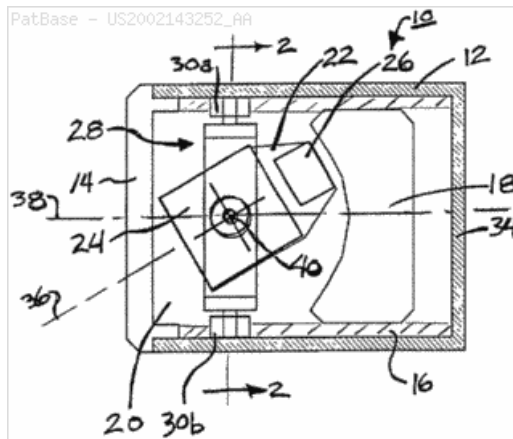
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Title: SPIRAL SCANNER WITH ELECTRONIC CONTROL

Abstract: A scanning device, typically ultrasonic, can make a volumetric scan of a conical scanning field. A transducer having a permanent magnet at its back end is gimbal mounted in a housing. Behind the permanent magnet is a hemispheric electromagnet coil assembly having at least two wound electromagnet coils. The coils are energized in turn with an alternating current signal, with the signal applied to any coil being out of phase with the signal applied to any other coil by 180 degrees /n, where n is the number of coils in the hemispheric electromagnet coil assembly. Volumetric scanning is possible by periodically modulating the magnitude or frequency of the signals applied to the coils.

Classifications:

International (IPC 8-9): B06B1/04 G01S15/89 G01S7/521 G10K11/00 G10K11/35 (Advanced/Invention); B06B1/02 G01S15/00 G01S7/521 G10K11/00 (Core/Invention)
International (IPC 1-7): A61B8/00 G01S15/89 G01S7/521
CPC: G02B26/101 B06B1/04 G01S7/521 G01S15/8947 G02B7/1821 G10K11/004 G10K11/355 A61B5/0062 A61B8/4281 A61B8/4461 A61B8/483 A61B5/0064 A61B5/0066
European: B06B1/04 G01S15/89D2D G01S7/521 G02B26/10B G10K11/00G G10K11/35B2 S02B7/182B
US: 244/3.16 244/316 600/437 600/437P 600/444

**Family:**

Publication number	Publication date	Application number	Application date
AU2002231496 AA	20020806	AU20020231496	20020123
US2002143252 AA	20021003	US20010768821	20010125
US6626834 BB	20030930	US20010768821	20010125
WO02059643 A2	20020801	WO2002CA00076	20020123
WO02059643 A3	20021024	WO2002CA00076	20020123

Priority:

US20010768821 20010125 WO2002CA00076 20020123

Probable Assignee: OPTOS PLC

Assignee(s): (std): OTI OPHTHALMIC TECHNOLOGIES IN ; OTI OPHTHALMIC TECHNOLOGIES

Assignee(s): OPTOS PLC ; OTI OPHTHALMIC TECHNOLOGIES INC ; DUNNE SHANE DENIS ; CHARLES STEVEN ; DUNNE SHANE

Inventor(s): (std): CHARLES STEVEN ; DUNNE SHANE ; DUNNE SHANE DENIS

Inventor(s): SHANE DENIS DUNNE ; STEVEN CHARLES

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

18) Family number: 60613653 (US2017028227A)

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Title: BAND TRANSDUCER ULTRASOUND THERAPY

Abstract: Embodiments of a dermatological cosmetic treatment and/or imaging system and method can include use of transducer to create a linear thermal treatment zone at a focal depth to form a band shaped treatment area. The system can include one or more ultrasound transducers, a cylindrical transduction element, an imaging element, a hand wand, a removable transducer module, a control module, and/or graphical user interface. In some embodiments, a coated transducer may be used to provide more consistent treatment in cosmetic procedures, including brow lifts, fat reduction, sweat reduction, and treatment of the décolletage. Skin tightening, lifting and amelioration of wrinkles and stretch marks are provided. Treatment may include heating of tissue for a duration to deactivate a percentage of cells in the treatment region.

Classifications:

International (IPC 8-9): A61B17/00 A61B18/18 A61B8/08 A61B8/14 A61F7/00 A61N A61N7/00 A61N7/02 G10K11/30

G10K11/35 (Advanced/Invention);

A61B17/00 A61N7/00 (Advanced/Non-invention);

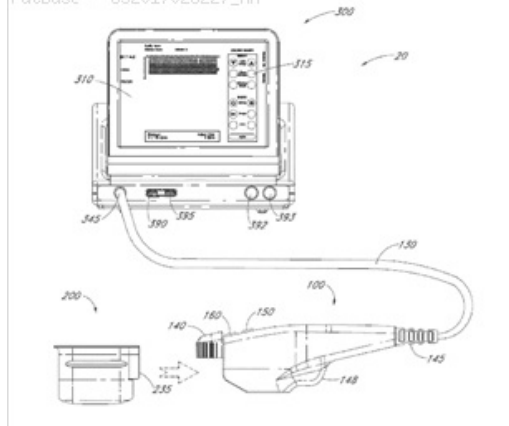
A61N (Subclass/Invention)

CPC: A61B2017/00084 A61B2017/00106 A61N7/02 A61N2007/0034

A61N2007/0065 A61N2007/0078 A61N2007/0082 A61N2007/0091

G10K11/30 G10K11/352

US: 1/1 601/3

**Family:**

Publication number	Publication date	Application number	Application date
AR100129 AA	20160914	AR2015P101167	20150417
AU2015247951 AA	20161117	AU20150247951	20150413
BR112016023889 A2	20170815	BR20161123889	20150413
CA2944707 AA	20160930	CA20152944707	20150413
CN106470735 A	20170301	CN201580032969	20150413
CN106470735 B	20190920	CN201580032969	20150413
EP3131630 A1	20170222	EP20150780378	20150413
EP3131630 A4	20171220	EP20150780378	20150413
HK1233204 A1	20180126	HK20170106973	20170711

HK1233204 B	20200515	HK20170106973	20170711
IL248279 A0	20161130	IL20150248279	20150413
IN201617033555 A	20170210	IN201617033555	20160930
JP2017513587 T2	20170601	JP20160562020T	20150413
KR20160145752 A	20161220	KR20167032187	20150413
MX2016013433 A1	20170118	MX20160013433	20150413
PH2016502043 A	20170206	PH20160502043	20161013
SG11201608691Y A1	20161129	SG20161108691	20150413
TW201540255 A	20151101	TW20150112451	20150417
US2017028227 AA	20170202	US20150302436	20150413
US2018117366 AA	20180503	US20170855949	20171227
US2020188705 AA	20200618	US20200797393	20200221
US10603521 BB	20200331	US20170855949	20171227
WO15160708 A1	20151022	WO2015US25581	20150413

Priority:

US20140981660P 20140418 US20150302436 20150413 WO2015US25581 20150413
US20160302436 20161006 US20170855949 20171227 US20200797393 20200221

Probable Assignee: ULTHERA INC

Assignee(s): (std): ULTHERA INC

Assignee(s): EMERY CHARLES D ; HOPE JOSHUA D ; PETERSON MICHAEL T

Inventor(s): (std): CHARLES D EMERY ; EMERY CHARLES D ; HOPE JOSHUA D ; JOSHUA D HOPE ; MICHAEL T PETERSON ; PETERSON MICHAEL T

Agent(s): FB RICE; FB RICE PTY LTD; GOWLING WLG CANADA LLP; RICKER MATHIAS; SPRUSON AND FERGUSON HONG KONG LTD; TACHIBANA KENJI; KNOBBE MARTENS OLSON AND BEAR LLP; ALTMAN DANIEL E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

19) Family number: 23515701 (US2003028111A)

© PatBase

Title: NOISE-FREE REAL TIME ULTRASONIC IMAGING OF A TREATMENT SITE UNDERGOING HIGH INTENSITY FOCUSED ULTRASOUND THERAPY

Abstract: Method and apparatus for the simultaneous use of ultrasound on a probe for imaging and therapeutic purposes. The probe limits the effects of undesirable interference noise in a display by synchronizing high intensity focused ultrasound (HIFU) waves with an imaging transducer to cause the noise to be displayed in an area of the image that does not overlap the treatment site. In one embodiment, the HIFU is first energized at a low power level that does not cause tissue damage, so that the focal point of the HIFU can be identified by a change in the echogenicity of the tissue caused by the HIFU. Once the focal point is properly targeted on a desired treatment site, the power level is increased to a therapeutic level. The location of each treatment site is stored and displayed to the user to enable a plurality of spaced-apart treatment sites to be achieved. As the treatment progresses, any changes in the treatment site can be seen in the real time, noise-free image. A preferred application of the HIFU waves is to cause lesions in blood vessels, so that the supply of nutrients and oxygen to a region, such as a tumor, is interrupted. The tumor will thus eventually be destroyed. In a preferred embodiment, the HIFU is used to treat disorders of the female reproductive system, such as uterine fibroids. The HIFU treatment can be repeated at spaced-apart intervals, until any remaining fibroid tissue is destroyed.

Classifications:

International (IPC 8-9): A61B1/00 A61B17/00 A61B17/32
A61B18/00 A61B5/00 A61B5/055 A61B6/00 A61B8/00 A61B8/06
A61B8/08 A61B8/12 A61B8/13 A61B8/14 A61H1/00 A61H1/02
A61H5/00 A61N7/00 A61N7/02 B06B1/00 (Advanced/Invention);
A61B17/42 A61B19/00 A61B8/00 A61B8/06 (Advanced/Non-invention);
A61B17/00 A61B18/00 A61B8/00 A61B8/06 A61B8/08 A61B8/12
A61B8/14 A61H1/00 A61N7/00 (Core/Invention);
A61B17/42 A61B19/00 A61B8/00 A61B8/06 (Core/Non-invention)

International (IPC 1-7): A61B8/00 A61B8/12 A61B8/14 A61H1/00
A61H1/02 A61H5/00 A61N7/00

CPC: A61N7/00 A61B8/0841 A61B8/462 A61B2017/2253

A61B2018/00434 A61B8/0816 A61B8/0808 A61B8/13 A61B5/0035
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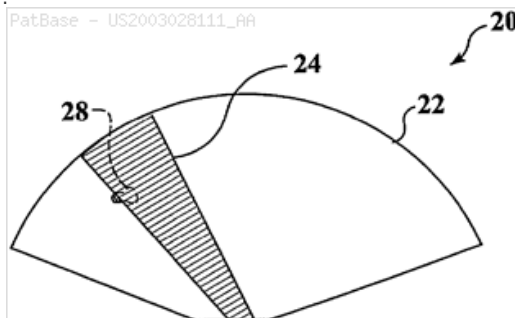
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K61B17/42C K61B18/00A2 K61B19/52H12 K61B19/52H12B4 K61B19/52H14 K61B562/16K K61B8/06 K61B8/08 K61B8/12
K61B8/48B K61N7/02C

European: A61B17/225C A61B19/52H12 A61B8/06 A61B8/08H A61B8/08H2 A61B8/12 A61B8/42D2 A61B8/42F2
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K61B17/42C K61B18/00A2 K61B19/52H12 K61B19/52H12B4 K61B19/52H14 K61B562/16K K61B8/06 K61B8/08 K61B8/12
K61B8/48B K61N7/02C

US: 367/152 600/101 600/127 600/411 600/411P 600/437 600/439 600/439P 600/439S 600/443 600/458 600/458S 600/459
600/459P 600/462 600/471 600/476 600/478 601/2 601/2P 601/2S 601/3

Family:

Publication number	Publication date	Application number	Application date
AU2005284695 AA	20060323	AU20050284695	20050916
CA2575687 AA	20070130	CA20052575687	20050916
EP1788950 A2	20070530	EP20050798681	20050916
EP1788950 A4	20091223	EP20050798681	20050916
JP2008513149 T2	20080501	JP20070532603T	20050916
MX2007003044 A1	20070802	MX20070003044	20050916
US2003028111 AA	20030206	US20020166795	20020607
US2005038340 AA	20050217	US20040770350	20040202
US2005203399 AA	20050915	US20040977339	20041029
US2005240126 AA	20051027	US20040016701	20041216
US2006052701 AA	20060309	US20050207554	20050818



US2006235303 AA	20061019	US20050229005	20050916
US2008051656 AA	20080228	US20070928667	20071030
US2010234728 AA	20100916	US20090390975	20090223
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US2011040171 AA	20110217	US20100887232	20100921
US2011040214 AA	20110217	US20100887178	20100921
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US2012316426 AA	20121213	US20120590146	20120820
US2013096431 AA	20130418	US20120681379	20121119
US2014094682 AA	20140403	US20130095986	20131203
US6425867 BA	20020730	US19990397471	19990917
US6716184 BB	20040406	US20020166795	20020607
US7510536 BB	20090331	US20040016701	20041216
US7520856 BB	20090421	US20040977339	20041029
US7686763 BB	20100330	US20040770350	20040202
US7722539 BB	20100525	US20050207554	20050818
US7850626 BB	20101214	US20070928667	20071030
US8197409 BB	20120612	US20090390975	20090223
US8206299 BB	20120626	US20100887211	20100921
US8211017 BB	20120703	US20100887178	20100921
US8337434 BB	20121225	US20100946727	20101115
US8611189 BB	20131217	US20050229005	20050916
WO06032059 A2	20060323	WO2005US33587	20050916
WO06032059 A3	20070301	WO2005US33587	20050916

Priority:

US19980100812P	19980918	US19990397471	19990917	US20020166795	20020607
US20030516099P	20031031	US20030529916P	20031216	US20040770350	20040202
US20040610451P	20040916	US20040977339	20041029	US20040016701	20041216
US20050207554	20050818	US20050229005	20050916	WO2005US33587	20050916
US20070928667	20071030	US20090390975	20090223	US20100887178	20100921
US20100887211	20100921	US20100887232	20100921	US20100946727	20101115
US20120590146	20120820	US20120681379	20121119	US20130095986	20131203

Probable Assignee: OF WASHINGTON UNIV

Assignee(s): (std): CHAN ARTHUR H ; FOLEY JESSICA ; FUJIMOTO VICTOR Y ; MARTIN ROY W ; LITTLE JAMES W ; FOLEY JESSICA L ; MOORE DONALD E ; MIRABILIS MEDICA ; UNIV WASHINGTON ; NGUYEN THUC NGHI ; NGUYEN THUC N ; VAEZY SHAHRAM ; UNIV WASHINGTON CT FOR COMMERCIALIZATION ; UNIV WASHINGTON CT COMMERCIALIZATION ; ZDERIC VESNA

Assignee(s): WASHINGTON UNIV OF ; THE UNIVERSITY OF WASHINGTON ; US GOVERNMENT SECRETARY FOR ARMY ; NAVY SECRETARY OF UNITED STATES OF AMERICA ; US ARMY SECRETARY OF ARMY ; OF WASHINGTON CENTER FOR COMMERCIALIZATION UNIV ; OF WASHINGTONSEATTLE WASHINGTON UNIV ; SONIC CONCEPTS INC ; UNIVERSITY OF WASHINGTON ; WASHINGTON UNIV ; OF WASHINGTON UNIV ; NATIONAL INSTITUTES OF HEALTH ; NATIONAL INSTITUTES OF HEALTH NIH US DEPT OF HEALT ; NATIONAL INSTITUTES OF HEALTH (NIH) US DEPT OF HEALTH AND HUMAN SERVICES (DHHS) US GOVERNMENT ; NATIONAL INSTITUTES OF HEALTH NIH US DEPT OF HEALTH AND HUMAN SERVICES DHHS US GOVERNMENT ; NATIONAL INST ; MIRABILIS MEDICA INC

Inventor(s): (std): CARTER STEPHEN J ; CRUM LAWRENCE A ; CHAN ARTHUR H ; FOLEY JESSICA ; MARTIN ROY W ; KEILMAN GEORGE W ; MOORE DONALD E ; LITTLE JAMES W ; FUJIMOTO VICTOR Y ; FOLEY JESSICA L ; NGUYEN THUC N ; NGUYEN THUC NGHI ; NGUYEN THUE NGHI ; LITTLE JAMES ; ZDERIC VESNA ; VAEZY SHAHRAM

Inventor(s): VESNA ZDERIC ; THUC NGHI NGUYEN ; CARTER STEPHEN ; THUE NGHI NGUYEN ; VICTOR Y FUJIMOTO ; NGUYEN THUC ; ROY W MARTIN ; STEPHEN J CARTER ; LAWRENCE A CRUM ; MARTIN ROY ; MOORE DONALD ; SHAHRAM VAEZY ; JESSICA FOLEY ; FUJIMOTO VICTOR ; KEILMAN GEORGE ; GEORGE W KEILMAN ; CHAN ARTHUR ; CRUM LAWRENCE

Agent(s): FREEHILLS PATENT AND TRADE MARK ATTORNEYS; FREEHILLS PATENT ATTORNEYS; HERBERT SMITH FREEHILLS; FPA PATENT ATTORNEYS PTY LTD; SMART AND BIGGAR; TANI YOSHIKAZU; ABE KAZUO; MICHAEL C KING LAW OFFICES OF RONALD M ANDERSON; LAW OFFICES OF RONALD M ANDERSON; RONALD M ANDERSON; ANDERSON RONALD M; RONALD M; KING AND SPALDING LLP; PETER J; PERKINS COIE LLP

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV LY MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

20) Family number: 28396704 (US2003055308A)

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Title: ULTRASOUND IMAGING WITH ACQUISITION OF IMAGING DATA IN PERPENDICULAR SCAN PLANES

Abstract: An ultrasonic imaging array has two independent, interleaved linear subarrays occupying a common array face. The subarrays are independently steerable and focusable in different imaging planes. The subelements making up the elements in of the subarrays is preferably quadrilateral. Adjacent subelements in each element are electrically connected via an interconnect portion such that the interconnect portion connecting each pair of adjacent subelements in each element is substantially linear and is aligned with the diagonals of the adjacent subelements. A preferred acoustic lens is curved in both azimuth and elevation directions, whereby the subarrays are independently focusable. By transmitting in one plane and simultaneously receiving in a different, orthogonal plane, a system including the array can image a 3-D region of interest (ROI). In a volumetric embodiment of the invention two orthogonal B-mode images of a structure within the ROI are displayed simultaneously. The user may then trace the outlines of the images and the system therefrom calculates the volume of the structure.

Classifications:

International (IPC 8-9): A61B8/14 B06B1/06 G01S15/89

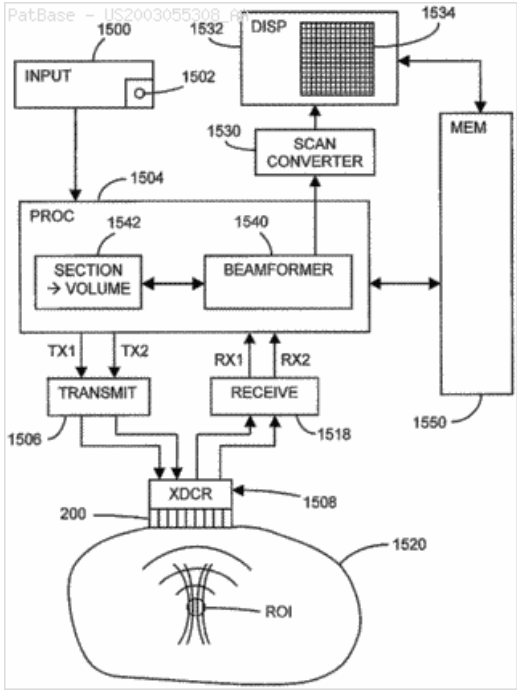
G10K11/30 (Advanced/Invention);

A61B8/14 B06B1/06 G01S15/00 G10K11/00 (Core/Invention)

International (IPC 1-7): A61B8/00 A61N1/00

CPC: A61B8/14 A61B8/145 A61B8/4483 B06B1/0629 G01S15/8925 G01S15/8927 G01S15/8993 G10K11/30

European: A61B8/14 A61B8/14B A61B8/44R B06B1/06C3B



Family:

Publication number	Publication date	Application number	Application date
US2003055308 AA	20030320	US20010944650	20010831
US6537220 BA	20030325	US20010944650	20010831

Priority:

US20010944650 20010831

Probable Assignee: SIEMENS MEDICAL SOLUTIONS USA INC

Assignee(s): (std): SIEMENS MEDICAL SOLUTIONS ; SIEMENS MEDICAL SYSTEMS INC ; SIEMENS MEDICAL SOLUTIONS USA

Assignee(s): SIEMENS MEDICAL SOLUTIONS USA INC ; SIEMENS MEDICAL SOLUTIONS U INC SA

Inventor(s): (std): FRIEMEL BARRY HUGH ; EMERY CHARLES DALE

Inventor(s): BARRY HUGH FRIEMEL ; CHARLES DALE EMERY

21) Family number: 31843909 (US2005085731A)

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Title: ULTRASOUND TRANSDUCER FINGER PROBE

Abstract: Finger probe for use in ultrasonic imaging includes a housing and a matrix array arranged within the housing to produce ultrasound beams and which includes a plurality of independently-addressable transducer elements. A finger clip is coupled to the housing and arranged to accommodate an operator's finger. A control unit is coupled to the transducer elements to provide planar and volumetric scanning capabilities. A system and method for ultrasonically interrogating a patient's body part and for producing ultrasound images based on the interrogation using a finger-mounted ultrasound probe are also disclosed.

Classifications:

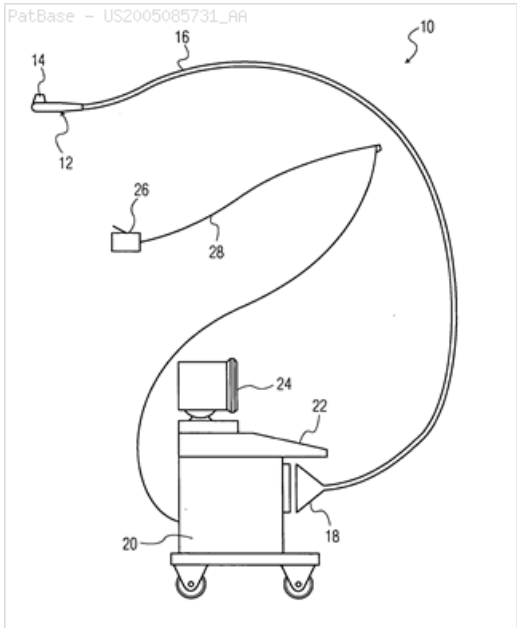
International (ipc 8-9): A61B8/00 A61B8/12 (Advanced/Invention); A61B8/12 (Core/Invention)

International (ipc 1-7): A61B8/00 A61B8/14

CPC: A61B8/445 A61B8/12 A61B8/42

European: A61B8/12 A61B8/42

US: 600/459 600/459P



Family:

Publication number	Publication date	Application number	Application date
JP2005125093 A2	20050519	JP20040304372	20041019
US2005085731 AA	20050421	US20040965508	20041014
US2011137176 AA	20110609	US20100785657	20100524

Priority:

US20030512997 20031021 US20030512997P 20031021 US20040965508 20041014
US20100785657 20100524

Probable Assignee: PHILIPS ELECTRONICS KONINKLL NV

Assignee(s): (std): KONINKL PHILIPS ELECTRONICS NV

Assignee(s): KONINKLIJKE PHILIPS ELECTRONICS N V ; MILLER DAVID G ; PESZYNSKI MICHAEL E ; PHILIPS ELECTRONICS KONINKLL NV ; PHILIPS KONINKLL NV

Inventor(s): (std): MILLER DAVID G ; PESZYNSKI MICHAEL E

Inventor(s): MILLER DAVID ; PESZYNSKI MICHAEL

Agent(s): PHILIPS INTELLECTUAL PROPERTY AND STANDARDS

22) Family number: 56958990 (US2015297188A)

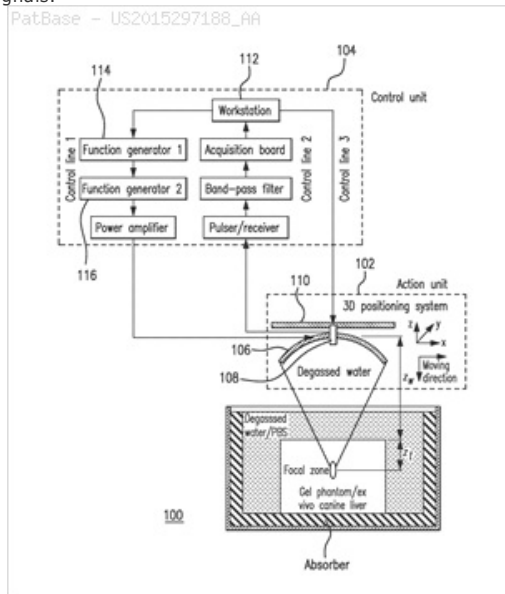
© PatBase

Title: SYSTEMS AND METHODS FOR ESTIMATING ACOUSTIC ATTENUATION IN A TISSUE

Abstract: Systems and techniques for estimating acoustic attenuation in a tissue from time-varying radiation force information generated through the application of acoustic energy to the tissue from at least first and second focal depths are provided. An exemplary technique includes acquiring first signals representing oscillatory motion of the tissue in response to the radiation force proximate the first focal depth, and acquiring second signals representing oscillatory motion of the tissue in response to the radiation force proximate the second focal depth. The technique further includes estimating the oscillatory motion of the tissue from each of the first and second signals, and estimating the acoustic attenuation in the tissue from the estimated oscillatory motion of the tissue from the first and second signals.

Classifications:

International (IPC 8-9): A61B8/00 A61B8/08 A61B8/14
G01N29/11 (Advanced/Invention)
CPC: G01N29/343 G01N2291/02475 G01N29/0654 G01N29/11
A61B8/485 A61B8/587 A61B8/5223 A61B8/08 A61B8/4477
A61N7/02 A61N2007/0091 A61N2007/0095 G16H50/30
US: 600/442



Family:

Publication number	Publication date	Application number	Application date
US2015297188 AA	20151022	US20150695674	20150424
WO14113442 A1	20140724	WO2014US11631	20140115

Priority:

US20130753706P 20130117 WO2014US11631 20140115 US20140983733P 20140424
US20150695674 20150424

Probable Assignee: TRUSTEES OF COLUMBIA UNIV IN CITY OF NEW YORK

Assignee(s): (std): UNIV COLUMBIA

Assignee(s): TRUSTEES OF COLUMBIA UNIV IN CITY OF NEW YORK

Inventor(s): (std): CHEN JIANGANG ; HOU GARY YI ; KONOFAGOU ELISA E

Agent(s): PATRICK CHRISTOPHER ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW