

9 Documents

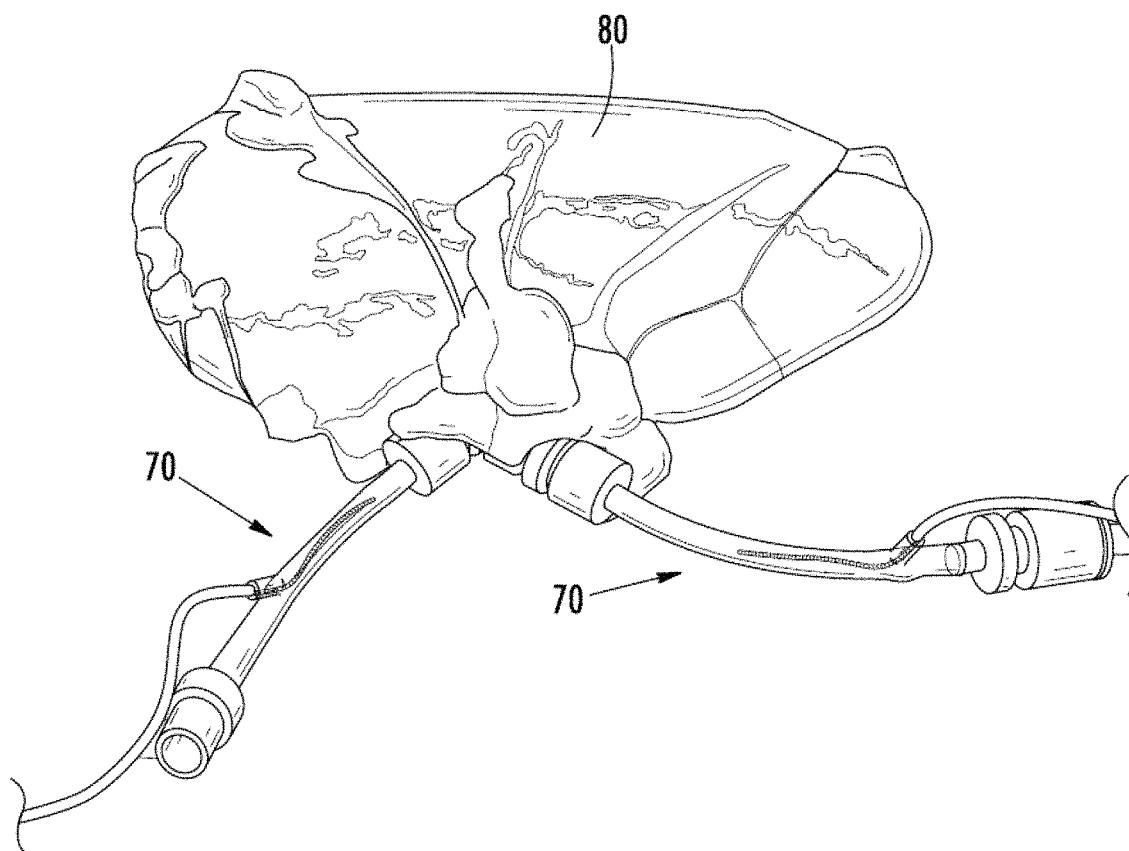
Publication numbers	Title	Current assignees
WO201271526 A2	Irreversible electroporation using tissue vasculature to treat aberrant cell masses or create tissue scaffolds	VIRGINIA TECH INTELLECTUAL PROPERTIES
WO200565284 A2	Tissue ablation with irreversible electroporation	UNIVERSITY OF CALIFORNIA
US20130218157 A1	System and method for increasing a target zone for electrical ablation	ANGIODYNAMICS
CN103315808 A	Ablation electrode and perfusion electrode catheter using same	SYNAPTIC MEDICAL BEIJING
US20120220999 A1	Electrical ablation devices and methods	ETHICON ENDO SURGERY
US6328735 B1	Thermal ablation system	THERMEDICAL
WO9517222 A1	Fluid cooled and perfused tip for a catheter	CORDIS WEBSTER
US20180161086 A1	Immunotherapeutic methods using irreversible electroporation	VIRGINIA TECH INTELLECTUAL PROPERTIES
US20150088120 A1	System and method for estimating a treatment volume for administering electrical-energy based therapies	ANGIODYNAMICS, ...

Family 1/9 - FAMPAT - ©Questel

Title

(EP2642937)

Irreversible electroporation using tissue vasculature to treat aberrant cell masses or create tissue scaffolds

Images**Publication data including kind & date**

WO2012071526	A2	2012-05-31	WO201271526
WO2012071526	A3	2013-01-17	WO201271526
US20130253415	A1	2013-09-26	US20130253415
EP2642937	A2	2013-10-02	EP2642937
JP2014501574	A	2014-01-23	JP2014501574
EP2642937	A4	2014-05-07	EP2642937
US9867652	B2	2018-01-16	US9867652
US20180125565	A1	2018-05-10	US20180125565

**Abstract**

(EP2642937)

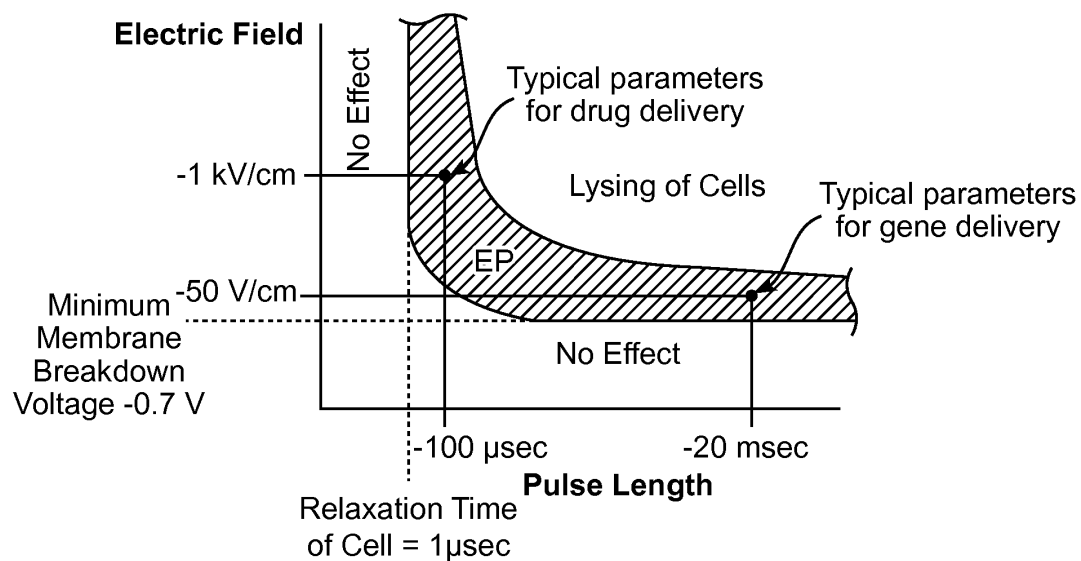
The present invention relates to the field of medical treatment of diseases and disorders, as well as the field of biomedical engineering. Embodiments of the invention relate to the delivery of Irreversible Electroporation (IRE) through the vasculature of organs to treat tumors embedded deep within the tissue or organ, or to decellularize organs to produce a scaffold from existing animal tissue with the existing vasculature intact. In particular, methods of administering non-thermal irreversible electroporation (IRE) in vivo are provided for the treatment of tumors located in vascularized tissues and organs. Embodiments of the invention further provide scaffolds and tissues from natural sources created using IRE ex vivo to remove cellular debris, maximize recellularization potential, and minimize foreign body immune response. The engineered tissues can be used in methods of treating subjects, such as those in need of tissue replacement or augmentation.

Inventors

SANO MICHAEL

Latest standardized assignees - inventors removed
VIRGINIA TECH INTELLECTUAL PROPERTIES

Images



WO2005065284	A2	2005-07-21	WO2005065284
CA2550846	A1	2005-07-21	CA2550846
AU2004311842	A1	2005-07-21	AU2004311842
US20050171574	A1	2005-08-04	US20050171574
US20050171523	A1	2005-08-04	US20050171523
WO2005065284	A3	2005-11-17	WO2005065284
EP1696812	A2	2006-09-06	EP1696812
US20070043345	A1	2007-02-22	US20070043345
JP2007516792	A	2007-06-28	JP2007516792
US20080269586	A1	2008-10-30	US20080269586
US20090326436	A1	2009-12-31	US20090326436
EP1696812	A4	2010-03-03	EP1696812
AU2004311842	B2	2010-06-10	AU2004311842
AU2010214761	A1	2010-09-23	AU2010214761
AU2004311842	C1	2011-01-06	AU2004311842
US8048067	B2	2011-11-01	US8048067
US20120071874	A1	2012-03-22	US20120071874
EP2474281	A1	2012-07-11	EP2474281
US8282631	B2	2012-10-09	US8282631



US8298222	B2	2012-10-30	US8298222				
US20120277741	A1	2012-11-01	US20120277741				
AU2010214761	B2	2012-12-06	AU2010214761				
JP5138229	B2	2013-02-06	JP5138229				
JP2013046766	A	2013-03-07	JP2013046766				
US9005189	B2	2015-04-14	US9005189				
US20150173824	A1	2015-06-25	US20150173824				
EP1696812	B1	2015-07-22	EP1696812				
JP5766163	B2	2015-08-19	JP5766163				
ES2543832	T3	2015-08-24	ES2543832				
DK1696812	T3	2015-10-26	DK1696812T				
CA2550846	C	2018-01-23	CA2550846				
US10117701	B2	2018-11-06	US10117701				
US20190046255	A1	2019-02-14	US20190046255				

Abstract

(EP2474281)

A new device for the ablation of undesirable tissue such as cells of a cancerous or non-cancerous tumor is disclosed. It involves the placement of electrodes into or near the vicinity of the undesirable tissue through the application of electrical pulses causing irreversible electroporation of the cells throughout the entire area of the undesirable tissue. The electric pulses irreversibly permeate the cell membranes, thereby invoking cell death. The irreversibly permeabilized cells are left in situ and are removed by the body immune system. The amount of tissue ablation achievable through the use of irreversible electroporation without inducing thermal damage is considerable.

Inventors

DAVALOS RAFAEL

RUBINSKY BORIS

Latest standardized assignees - inventors removed

UNIVERSITY OF CALIFORNIA

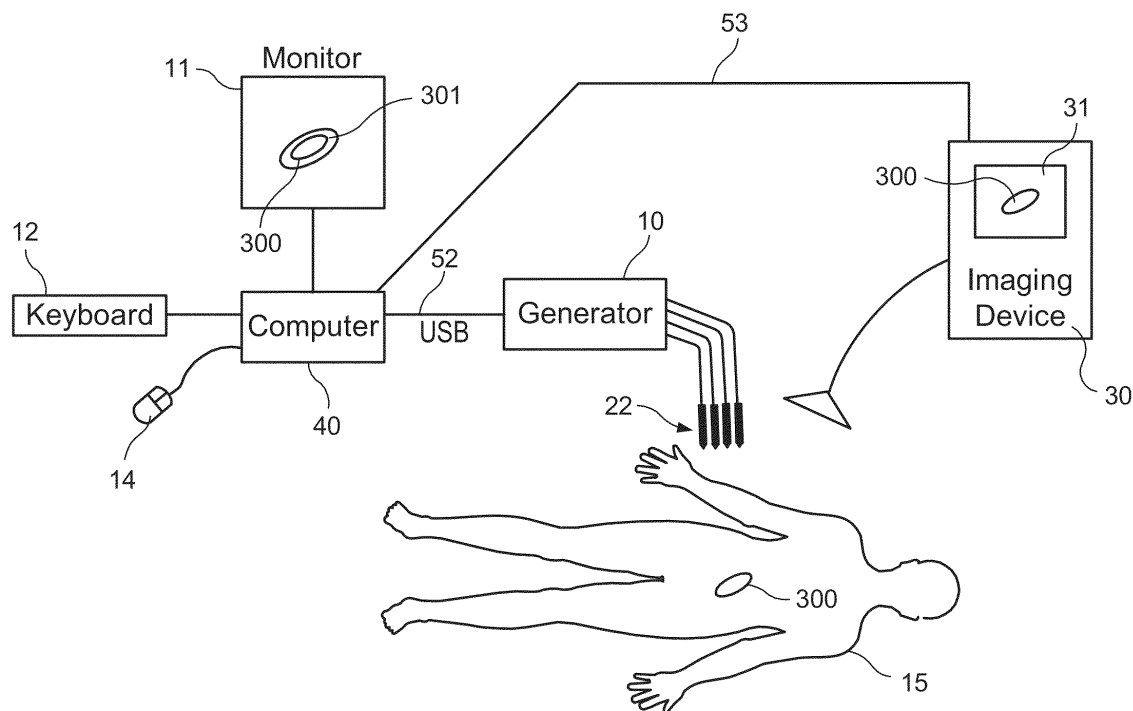
Family 3/9 - FAMPAT - ©Questel

Title

(US9414881)

System and method for increasing a target zone for electrical ablation

Images



Publication data including kind & date

US20130218157	A1	2013-08-22	US20130218157
US20140046322	A1	2014-02-13	US20140046322
US9414881	B2	2016-08-16	US9414881
US20160235470	A1	2016-08-18	US20160235470



Abstract

(US9414881)

System for increasing a target zone for electrical ablation includes a treatment control module executable by a processor. The control module directs a pulse generator to apply pre-conditioning pulses to subject tissue cells in a pre-conditioning zone to electroporation, the pre-conditioning zone being smaller than a target ablation zone. After the pre-conditioning pulses have been applied, the control module directs the pulse generator to apply treatment pulses to electrically ablate the tissue cells in the target ablation zone. The pre-conditioning pulses cause the pre-conditioning zone to have a much higher conductivity so that the zone acts as a larger electrode area when the treatment pulses are applied, which results in a much larger target ablation zone than otherwise possible.

Inventors

CALLAS PETER

JOE WESLEY CHUNG

Latest standardized assignees - inventors removed

ANGIODYNAMICS

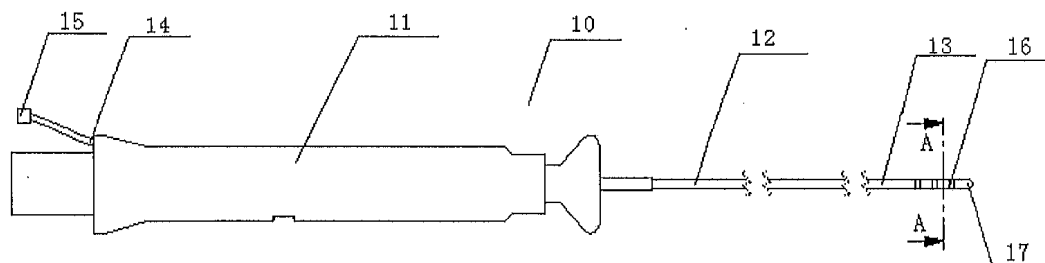
Family 4/9 - FAMPAT - ©Questel

Title

(EP2829249)

Ablation electrode and perfusion electrode catheter using same

Images



Publication data including kind & date

CN103315808	A	2013-09-25	CN103315808
WO2013139178	A1	2013-09-26	WO2013139178
CN104220018	A	2014-12-17	CN104220018
US20150025526	A1	2015-01-22	US20150025526
EP2829249	A1	2015-01-28	EP2829249
EP2829249	A4	2015-11-18	EP2829249
CN104220018	B	2018-02-27	CN104220018B



Abstract

(EP2829249)

The present invention discloses an ablation electrode used in a catheter. The ablation electrode includes an electrode shell, an optional cavity inside the electrode shell and a temperature sensor. An outflow liquid pathway for the perfusion liquid is arranged on the electrode shell, and an inflow liquid pathway for the perfusion liquid is arranged in the proximal end of the electrode shell. A thermal conduction isolation structure is arranged between the temperature sensor and the liquid pathway. The thickness of the electrode shell where the temperature sensor is located is less than 0.2mm. The present invention also provides a perfusion electrode catheter which includes the ablation electrode. The perfused electrode catheter of the present invention can provide efficient prompts on the rising ablation temperature in the ablation process.

Inventors

HUA XIN
HANSEN SOPHIA WANG
FENG JI
GONG JIE

Latest standardized assignees - inventors removed

SYNAPTIC MEDICAL BEIJING

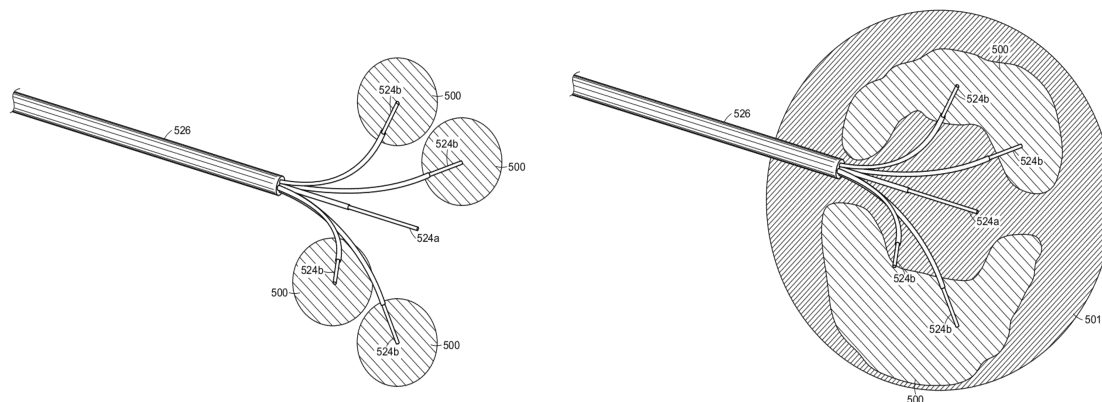
Family 5/9 - FAMPAT - ©Questel

Title

(WO2012118659)

Electrical ablation devices and methods

Images

**Publication data including kind & date**

US20120220999	A1	2012-08-30	US20120220999
US20120220998	A1	2012-08-30	US20120220998
WO2012118659	A1	2012-09-07	WO2012118659
US9233241	B2	2016-01-12	US9233241
US9314620	B2	2016-04-19	US9314620

**Abstract**

(WO2012118659)

An electrical ablation device may generally comprise first and second electrodes coupled to an energy source operative to generate and deliver a first sequence of electrical pulses and a second sequence of electrical pulses to tissue having a necrotic threshold, wherein the first sequence of electrical pulses delivers a first energy dose that is less than the necrotic threshold to induce thermal heating in the tissue and the second sequence of electrical pulses delivers a second energy dose equal to or greater than the necrotic threshold to induce cell necrosis in the tissue by irreversible electroporation. The first sequence of electrical pulses may each be independently characterized by a first amplitude, a first pulse width, and a first frequency. The second sequence of electrical pulses may be characterized by a second amplitude, a second pulse width, and a second frequency.

Inventors

LONG GARY L

PLESCIA DAVID N

BAKOS GREGORY J

Latest standardized assignees - inventors removed

ETHICON ENDO SURGERY

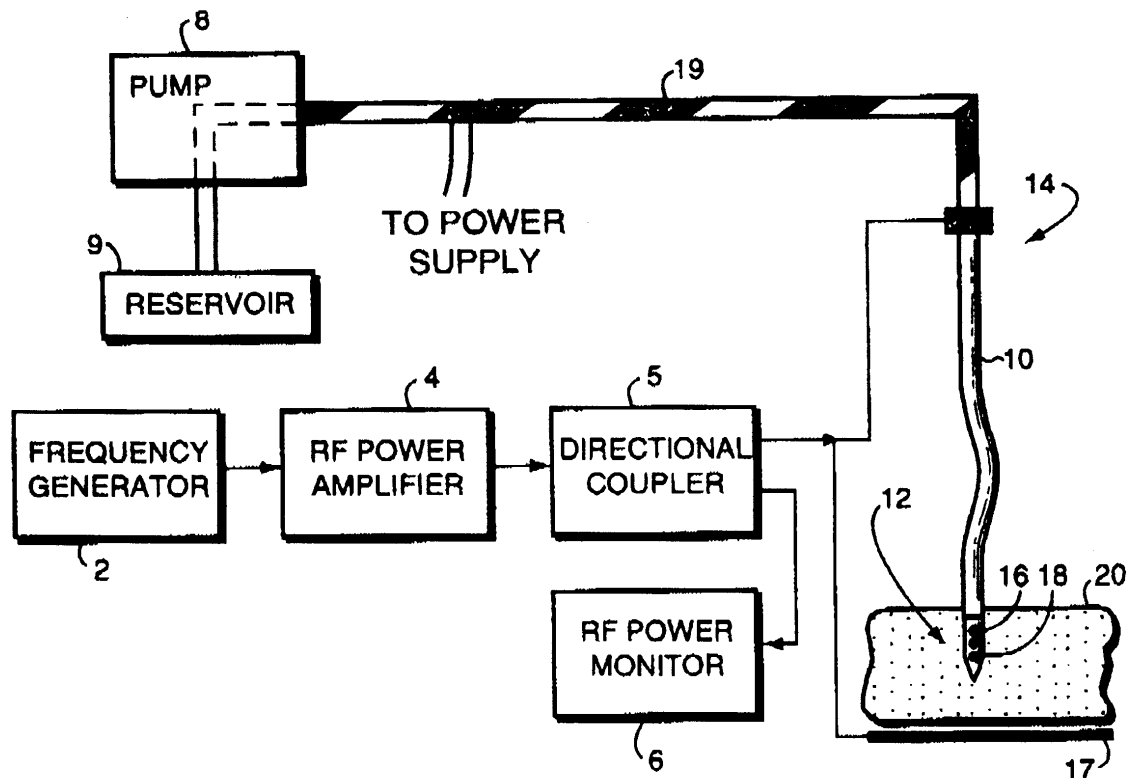
Family 6/9 - FAMPAT - ©Questel

Title

(US6328735)

Thermal ablation system

Images

**Publication data including kind & date**

US6328735

B1 2001-12-11 US6328735

**Abstract**

(US6328735)

A method and system for therapeutically treating a selected volume of tissue with a heated liquid. A therapeutic device, such as a catheter, is coupled to a source of liquid is heated to therapeutic temperatures by a heating mechanism. The device imparts thermal energy into the tissue while simultaneously injecting the heated liquid into the tissue. In a preferred embodiment, the device includes at least one electrode for conducting a radio-frequency current through the tissue in conjunction with the infusion of heated saline solution to selectively destroy the tissue.

Inventors

CURLEY MICHAEL G

HAMILTON PATRICK S

Latest standardized assignees - inventors removed

THERMEDICAL

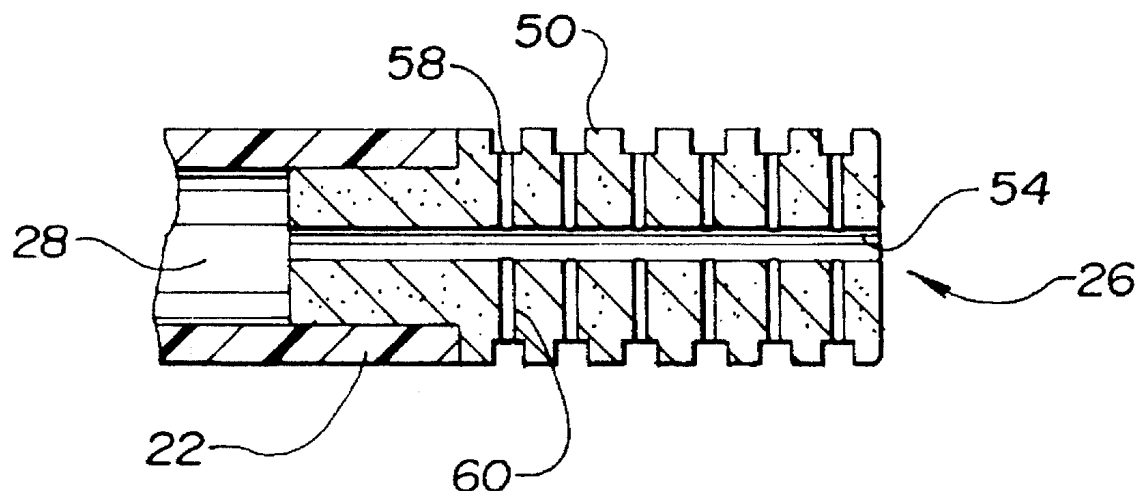
Family 7/9 - FAMPAT - ©Questel

Title

(EP-746372)

Fluid cooled and perfused tip for a catheter

Images



Publication data including kind & date

WO9517222	A1	1995-06-29	WO9517222
CA2179711	A1	1995-06-29	CA2179711
AU1866695	A	1995-07-10	AU9518666
US5462521	A	1995-10-31	US5462521
EP0746372	A1	1996-12-11	EP-746372
US5643197	A	1997-07-01	US5643197
JPH09506808	A	1997-07-08	JP09506808
AU682938	B2	1997-10-23	AU-682938
EP0746372	A4	1998-05-20	EP-746372
US6017338	A	2000-01-25	US6017338
EP0746372	B1	2003-05-14	EP-746372
DE69432671	D1	2003-06-18	DE69432671
DE69432671	T2	2004-03-11	DE69432671
CA2179711	C	2004-08-03	CA2179711
JP3606328	B2	2005-01-05	JP3606328



Abstract

(EP-746372)

The invention relates to an ablation catheter (20) which controls the temperature and reduces the coagulation of biological fluids on a tip (26) of a catheter (20); prevents the impedance rise of tissue in contact with the catheter tip (26); and maximizes the energy transfer to the tissue, thereby allowing an increase in the lesion size produced by the ablation. The ablation catheter includes a tip (26) for applying electrical energy to biological tissue. Passages (48) are positioned within the tip (26) in a variety of manners for directing a fluid flow through the tip (26) to the exterior surface of the tip (26) to control the temperature and form a protective fluid layer around the tip (26). Monitoring structure (47) is also positioned within the tip for measurement of the electrical potentials in a biological tissue. Ablation electrode structure (30) is also positioned within the tip (26) for application of ablative energy to the biological tissue. A flexible, extended embodiment electrode (90) provides the capability to form deep, linear lesions along a portion of a heart wall during ablation for the treatment of particular arrhythmias.

Inventors

BRUCKER GREG G
SAUL JEROME PHILIP
SAVAGE STEVEN D

Latest standardized assignees - inventors removed

CORDIS WEBSTER

the human, thereby stimulating or otherwise modulating an immune system response within the body.

Inventors

DAVALOS RAFAEL V

ROSSMEISL JOHN H

GARCIA PAULO A

Latest standardized assignees - inventors removed

VIRGINIA TECH INTELLECTUAL PROPERTIES

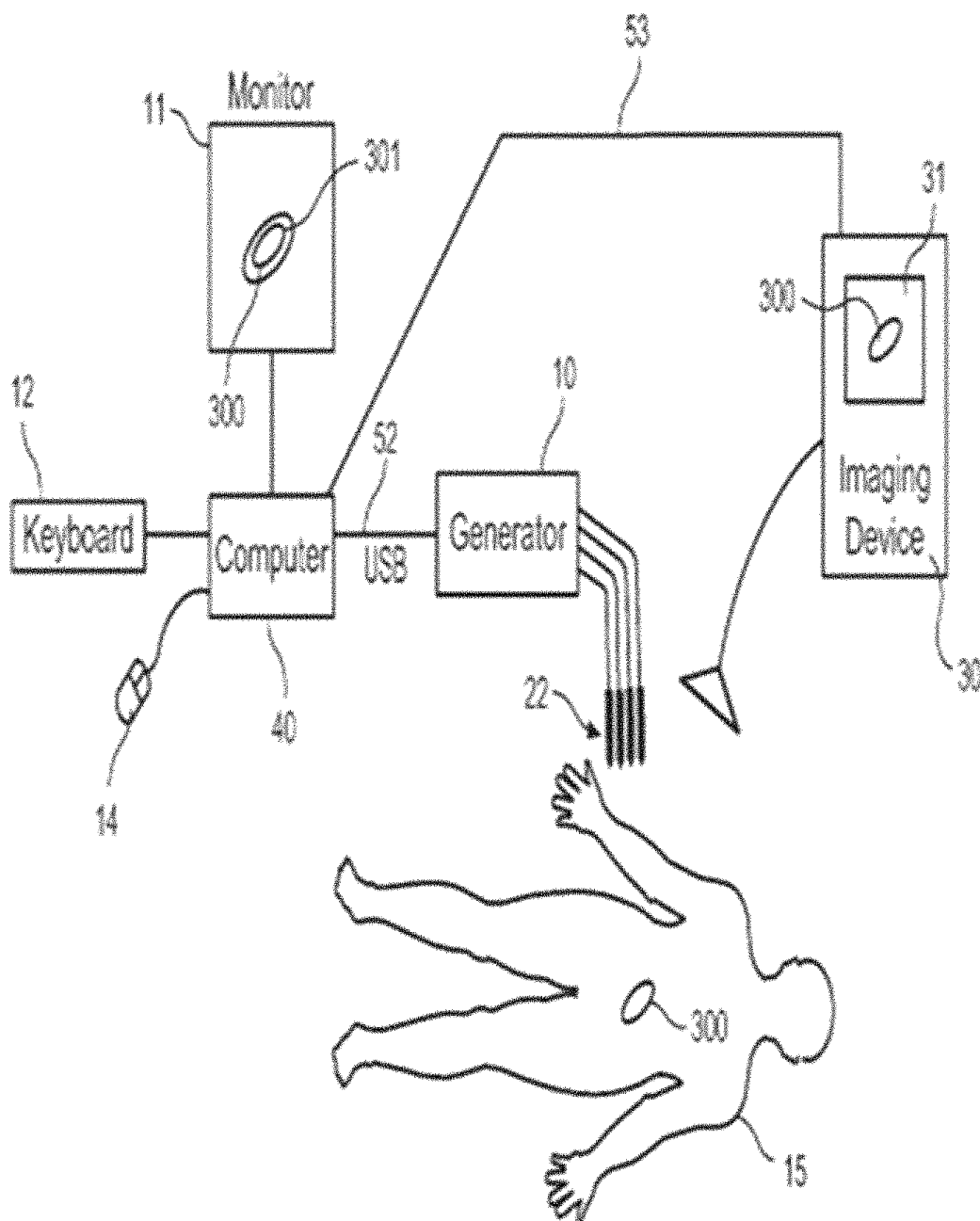
Family 9/9 - FAMPAT - ©Questel

Title

(US20160143698)

System and method for estimating a treatment volume for administering electrical-energy based therapies

Images



US20150088120	A1	2015-03-26	US20150088120				
US20160066977	A1	2016-03-10	US20160066977				
US20160143698	A1	2016-05-26	US20160143698				
US10117707	B2	2018-11-06	US10117707				

Abstract

(US20160143698)

The invention provides for a system for estimating a 3-dimensional treatment volume for a device that applies treatment energy through a plurality of electrodes defining a treatment area, the system comprising a memory, a display device, a processor coupled to the memory and the display device, and a treatment planning module stored in the memory and executable by the processor. In one embodiment, the treatment planning module is adapted to generate an estimated first 3-dimensional treatment volume for display in the display device based on the ratio of a maximum conductivity of the treatment area to a baseline conductivity of the treatment area. The invention also provides for a method for estimating 3-dimensional treatment volume, the steps of which are executable through the processor. In embodiments, the system and method are based on a numerical model which may be implemented in computer readable code which is executable through a processor.

Inventors

GARCIA PAULO A

DAVALOS RAFAEL V

Latest standardized assignees - inventors removed

ANGIODYNAMICS

VIRGINIA TECH INTELLECTUAL PROPERTIES