



(11) **EP 3 056 149 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
09.11.2016 Bulletin 2016/45

(51) Int Cl.:
A61B 6/00 (2006.01) **A61B 5/00 (2006.01)**
A61B 6/03 (2006.01)

(43) Date of publication A2:
17.08.2016 Bulletin 2016/33

(21) Application number: **16163909.1**

(22) Date of filing: **20.09.2011**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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(30) Priority: **20.09.2010 US 933477**

(62) Document number(s) of the earlier application(s) in accordance with Art. 76 EPC:
11826475.3 / 2 618 737

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(54) **LOCATING AND ANALYZING PERFORATOR FLAPS FOR PLASTIC AND RECONSTRUCTIVE SURGERY**

(57) A method and an apparatus for preoperative identification of a perforator vessel for plastic and/or reconstructive surgery using ICG fluorescence angiography imaging are disclosed. Time-resolved image processing is used to highlight perforator locations and

to enable visual discrimination among candidate perforators by various computed metrics. Based on these metrics, the surgeon is able to interactively locate and select perforator vessels suitable for plastic and reconstructive surgery

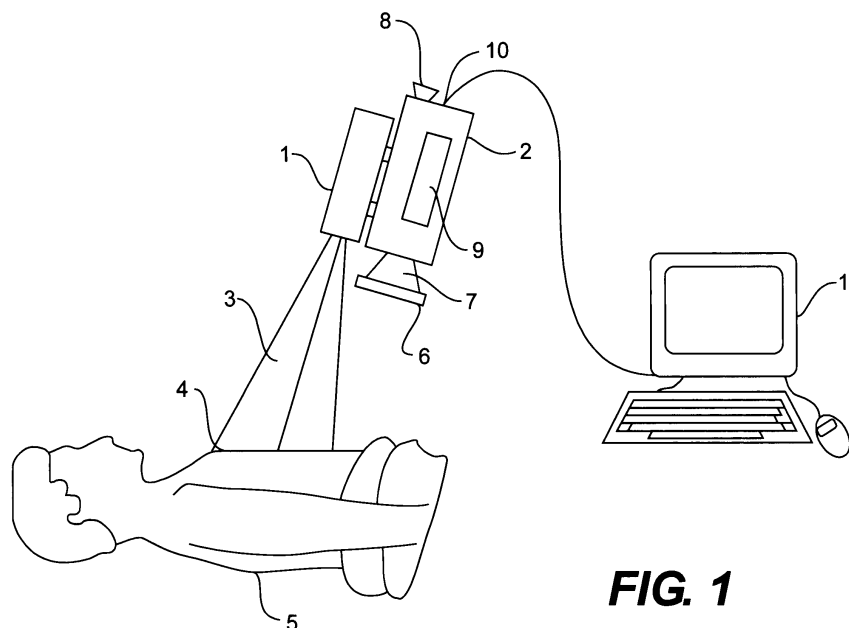


FIG. 1

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2009/127972 A2 (NOVADAQ TECHNOLOGIES INC [CA]; DVORSKY PETER [CA]; GOYETTE DAVID M H []) 22 October 2009 (2009-10-22) * paragraphs [0007], [0008], [0012], [0027], [0030] *	1-18	INV. A61B6/00 A61B5/00 A61B6/03
A	US 2008/044073 A1 (BERNHARDT PHILIPP [DE] ET AL) 21 February 2008 (2008-02-21) * figure 12 *	1,8,11,17	
			TECHNICAL FIELDS SEARCHED (IPC)
			A61B
-The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 21 June 2016	Examiner Knüpling, Moritz
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03/02 (P04C01)



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

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Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

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No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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see sheet B

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All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

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As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

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Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

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None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

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1-18

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The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

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1. claims: 1-18

Evaluation of tissue perfusion

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2. claim: 19

Normalising a reference region in an image

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ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.

EP 16 16 3909

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-06-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2009127972 A2	22-10-2009	BR PI0907272 A2	21-07-2015
		CN 102083362 A	01-06-2011
		EP 2268201 A2	05-01-2011
		HK 1158482 A1	06-11-2015
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专利名称(译)	定位和分析穿孔器皮瓣，用于整形和重建手术		
公开(公告)号	EP3056149A3	公开(公告)日	2016-11-09
申请号	EP2016163909	申请日	2011-09-20
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IPC分类号	A61B6/00 A61B5/00 A61B6/03		
CPC分类号	A61B5/0059 A61B5/413 A61B5/489 A61B2017/00792		
优先权	12/933477 2010-09-20 US PCT/IB2011/002381 2011-09-20 WO		
其他公开文献	EP3056149B1 EP3056149A2		
外部链接	Espacenet		

摘要(译)

公开了一种用于使用ICG荧光血管造影成像的用于塑料和/或重建手术的穿支血管的术前识别的方法和装置。时间分辨的图像处理用于突出穿孔器位置并且通过各种计算的度量使得能够在候选穿孔器之间进行视觉辨别。基于这些度量，外科医生能够交互地定位和选择适合于塑料和重建手术的穿孔血管

