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(71) Applicant: **Heartflow, Inc.**
Redwood City, CA 94063 (US)

(72) Inventors:
- **Taylor, Charles, A.**
  Menlo Park, CA 94025 (US)
- **Fonte, Timothy, A.**
  San Francisco, CA 94110 (US)
- **Choi, Gilwoo**
  Palo Alto, CA 94306 (US)
- **Bai, Ying**
  Belmont, CA 94002 (US)
- **Zarins, Christopher, K.**
  Menlo Park, CA 94025 (US)

(74) Representative: **Schulz, Oliver Frank Michael**
df-mp Dörries Frank-Molnia & Pohlman
Patentanwälte Rechtsanwälte PartG mbB
Theatinerstrasse 16
80333 München (DE)

(54) **Method and system for patient-specific modeling of blood flow**

(57) Embodiments include a system for determining cardiovascular information for a patient. The system may include at least one computer system configured to receive patient-specific data regarding a geometry of the patient's heart, and create a three-dimensional model representing at least a portion of the patient's heart based on the patient-specific data. The at least one computer system may be further configured to create a physics-based model relating to a blood flow characteristic of the patient's heart and determine a fractional flow reserve within the patient's heart based on the three-dimensional model and the physics-based model.

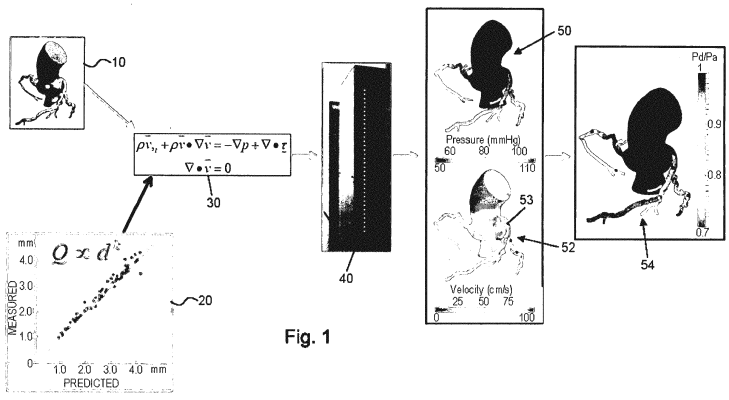

Fig. 1

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PARTIAL EUROPEAN SEARCH REPORT

under Rule 62a and/or 63 of the European Patent Convention. This report shall be considered, for the purposes of subsequent proceedings, as the European search report

Application Number
EP 14 18 9383

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	C.A. TAYLOR ET AL: "Patient-Specific Modeling of Cardiovascular Mechanics", ANNUAL REVIEW OF BIOMEDICAL ENGINEERING, vol. 11, no. 1, 1 August 2009 (2009-08-01) , pages 109-134, XP055167684, ISSN: 1523-9829, DOI: 10.1146/annurev.bioeng.10.061807.160521 * Introduction; page 110 * * first complete paragraph; page 111 * * page 114 * * page 112 * * page 119 - page 122 * ----- -/--	1-14	INV. A61B5/00

TECHNICAL FIELDS SEARCHED (IPC)

G06F
A61B

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.

Claims searched completely :

Claims searched incompletely :

Claims not searched :

Reason for the limitation of the search:

see sheet C

1

Place of search	Date of completion of the search	Examiner
Munich	19 May 2015	Sisk, Aisling

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 03.82 (P04E07)

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PARTIAL EUROPEAN SEARCH REPORT

Application Number
EP 14 18 9383

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	N M Wilson ET AL: "AN INTEGRATED SOFTWARE SYSTEM FOR PREOPERATIVELY EVALUATING AORTO-FEMORAL RECONSTRUCTION PROCEDURES", Summer Bioengineering Conference Sonesta Beach Resort in Key Biscayne, 25 June 2003 (2003-06-25), pages 899-900, XP055189900, Retrieved from the Internet: URL:http://www.tulane.edu/~sbc2003/pdfdocs/0899.PDF [retrieved on 2015-05-19] * the whole document * -----	1-14	
			TECHNICAL FIELDS SEARCHED (IPC)

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INCOMPLETE SEARCH SHEET C

Application Number
EP 14 18 9383

Claim(s) completely searchable:
-

Claim(s) searched incompletely:
1-14

Reason for the limitation of the search:

The claims extend beyond the context of the parent application as filed (Article 76(1) EPC). The claims were therefore incompletely searched, based on the support indicated by the applicant in the response to the invitation according to Rule 63 EPC, that is, Figure 29 and passages 238 to 266.

专利名称(译)	用于患者特定的血流建模的方法和系统		
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[标]申请(专利权)人(译)	哈特弗罗公司		
申请(专利权)人(译)	HEARTFLOW INC.		
当前申请(专利权)人(译)	HEARTFLOW INC.		
[标]发明人	TAYLOR CHARLES A FONTE TIMOTHY A CHOI GILWOO BAI YING ZARINS CHRISTOPHER K		
发明人	TAYLOR, CHARLES, A. FONTE, TIMOTHY, A. CHOI, GILWOO BAI, YING ZARINS, CHRISTOPHER, K.		
IPC分类号	A61B5/00 G16B45/00		
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优先权	61/401462 2010-08-12 US 61/401915 2010-08-20 US 61/402308 2010-08-26 US 61/402345 2010-08-27 US 61/404429 2010-10-01 US 13/013561 2011-01-25 US		
其他公开文献	EP2845537A2 EP2845537B1		
外部链接	Espacenet		

摘要(译)

实施例包括用于确定患者的心血管信息的系统。该系统可以包括至少一个计算机系统，其被配置为接收关于患者心脏的几何形状的患者特异性数据，并基于患者特异性数据创建表示患者心脏的至少一部分的三维模型。所述至少一个计算机系统还可以被配置为创建与患者心脏的血流特征相关的基于物理的模型，并基于所述三维模型和基于物理的模型确定患者心脏内的分数流量储备。。

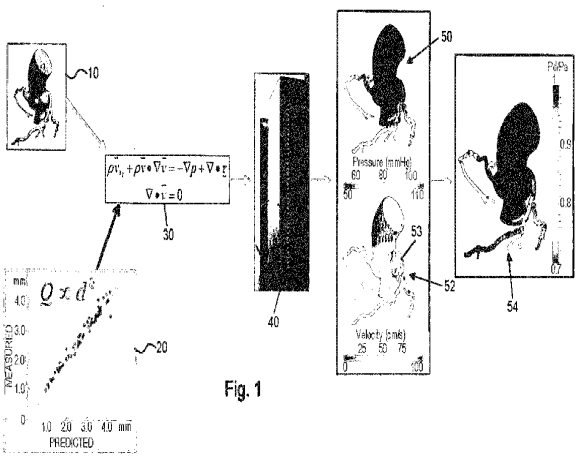

Fig. 1