

Title (en)
ANATOMIC KNEE PROSTHESIS AND DESIGNING METHOD

Title (de)
ANATOMISCHE KNEI PROTHESE UND ENTWURFSVERFAHREN

Title (fr)
PROTHÈSE ANATOMIQUE DE GENOU ET PROCÉDÉ DE CONCEPTION

Publication
EP 4093312 A2 20221130 (EN)

Application
EP 21706706 A 20210122

Priority

- US 202062964170 P 20200122
- US 202062964182 P 20200122
- IB 2021050496 W 20210122

Abstract (en)
[origin: WO2021149000A2] A knee prosthesis and a method of selecting for a particular patient a knee prosthesis from an inventory of available knee prostheses or from 3D knee prosthesis models is provided. The method includes the steps of (a) parameterizing a knee prosthesis according to well-defined and independent knee joint compartments, (b) generating a large number knee shapes in the form of 3D knee prosthesis models which reproduce the 3D shape asymmetries of each individual knee, thereby enabling the replication of the knee motion of essentially any patient by generating shapes which vary the shape parameters (surface and dimension) of at least one of those compartments and storing these 3D knee prosthesis models in a database, and (c) studying the patient's pathology and developing pre -pathological knee prosthesis criteria matching the patient's needs. Using a planning algorithm, a suitable knee prosthesis may be selected among an inventory of existing knee prostheses or the large number of knee shapes, the prosthesis or shape selected best meeting the patient's needs as determined by the study.

IPC 8 full level
A61B 34/10 (2016.01); **A61F 2/30** (2006.01); **A61F 2/38** (2006.01); **A61F 2/46** (2006.01)

CPC (source: EP)
A61B 34/10 (2016.02); **A61F 2/3094** (2013.01); **A61F 2/30942** (2013.01); **A61F 2/3859** (2013.01); **A61F 2/3877** (2013.01); **A61F 2/389** (2013.01); **A61B 2034/102** (2016.02); **A61B 2034/104** (2016.02); **A61B 2034/105** (2016.02); **A61B 2034/108** (2016.02); **A61F 2002/30943** (2013.01); **A61F 2002/30948** (2013.01); **A61F 2002/3895** (2013.01); **A61F 2002/4633** (2013.01)

Citation (search report)
See references of WO 2021149000A2

Designated contracting state (EPC)
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

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2021149000 A2 20210729; **WO 2021149000 A3 20210902**; **WO 2021149000 A4 20211111**; AU 2021211238 A1 20220818; BR 112022014496 A2 20220920; CN 115175629 A 20221011; EP 4093312 A2 20221130; JP 2023516265 A 20230419

DOCDB simple family (application)
IB 2021050496 W 20210122; AU 2021211238 A 20210122; BR 112022014496 A 20210122; CN 202180016757 A 20210122; EP 21706706 A 20210122; JP 2022545032 A 20210122