

Title (en)
3D LASER-ASSISTED POSITIONING SYSTEM

Title (de)
3D LASER-GESTÜTZTES POSITIONIERUNGSSYSTEM

Title (fr)
SYSTÈME DE POSITIONNEMENT 3D ASSISTÉ PAR LASER

Publication
EP 3946136 A1 20220209 (DE)

Application
EP 20720904 A 20200402

Priority
• DE 102019108753 A 20190403
• EP 2020059410 W 20200402

Abstract (en)
[origin: WO2020201428A1] The invention relates to a device (1) for positioning interventional instruments within an examination room, said device comprising a tomograph (11) for recording diagnostic image data of the examination room, a transversely movable and/or rotatable patient table (4), at least one radiation unit (2, 2A, 2B, 2C) having a radiation source which generates directed electromagnetic radiation, at least one carrier device (3, 3A, 3B, 3C) associated with each radiation unit (2, 2A, 2B, 2C), and a control unit for orienting each radiation unit (2, 2A, 2B, 2C) and the patient table (4) according to the access and target points selected on the basis of the diagnostic image data, wherein: each radiation unit (2, 2A, 2B, 2C) is displaceably mounted on the associated carrier device (3, 3A, 3B, 3C) with a first degree of freedom and the carrier device (3, 3A, 3B, 3C) ensures that said radiation unit (2, 2A, 2B, 2C) can be displaced relative to the patient table (4); an access point and the relative orientation of an instrument can be marked by means of the associated radiation unit (2, 2A, 2B, 2C) in order to reach a target point located in a trajectory of the instrument; the carrier device (3, 3A, 3B, 3C) is positioned in the coordinate system of the tomograph (11), specifically without coordination with a second coordinate system of the carrier device (3, 3A, 3B, 3C) or of the radiation source; the access point and the target point can be selected independently of one another from the diagnostic image data, and the radiation unit (2, 2A, 2B, 2C) comprises an orientation device (6) for orienting the radiation source and/or the radiation (5) in at least a second and a third degree of freedom; and the second and the third degree of freedom relate to different axes of movement. (Figure 2)

IPC 8 full level
A61B 90/13 (2016.01); **A61B 5/00** (2006.01); **A61B 5/05** (2021.01); **A61B 6/00** (2006.01); **A61B 6/03** (2006.01); **A61B 6/04** (2006.01); **A61B 34/10** (2016.01); **A61B 34/20** (2016.01); **A61B 90/00** (2016.01); **A61B 90/11** (2016.01)

CPC (source: EP US)
A61B 6/035 (2013.01 - US); **A61B 6/0407** (2013.01 - US); **A61B 34/10** (2016.02 - EP); **A61B 34/20** (2016.02 - EP); **A61B 90/13** (2016.02 - EP); **A61B 90/36** (2016.02 - EP); **A61B 6/032** (2013.01 - EP); **A61B 6/0407** (2013.01 - EP); **A61B 6/08** (2013.01 - EP); **A61B 2034/107** (2016.02 - EP US); **A61B 2090/374** (2016.02 - EP US); **A61B 2090/3762** (2016.02 - EP US); **G01R 33/48** (2013.01 - US)

Citation (search report)
See references of WO 2020201428A1

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

DOCDB simple family (publication)
WO 2020201428 A1 20201008; DE 102019108753 A1 20201008; EP 3946136 A1 20220209; US 2022142592 A1 20220512

DOCDB simple family (application)
EP 2020059410 W 20200402; DE 102019108753 A 20190403; EP 20720904 A 20200402; US 202017601101 A 20200402