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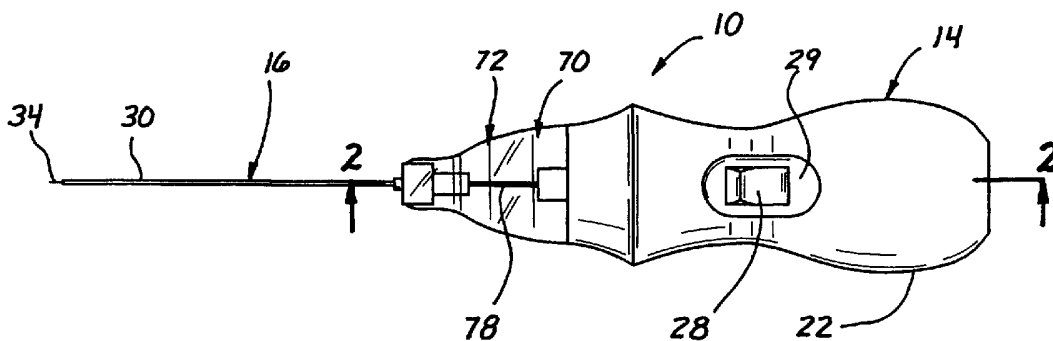
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(54) Title: MICRO-INVASIVE NUCLEOTOMY DEVICE AND METHOD



(57) Abstract: An apparatus (10) and method for removing intervertebral disc material, particularly nucleus pulposus (104), from a patient is provided. The apparatus generally includes a handpiece (14) and a tissue removal mechanism (16) operatively coupled thereto. The tissue removal mechanism (16) includes a cannula (30) adapted to be inserted into an intervertebral disc (102) and having an open distal tip (42) and an outer diameter of less than about 5mm, or less than about 2 mm. The mechanism (16) further includes a rotatable element (34) having a distal portion (52) with projections or threading, for example, a helical configuration (56). The distal portion (52) of the rotatable element (34) may extend beyond the open distal tip (42) of the cannula (30). The apparatus (10) is designed to draw nucleus material into the cannula (30) upon rotation of the rotatable element (34) and preferably without the need for supplemental sources of suction. Further provided is a method for monitoring intervertebral disc pressure before, during and/or after a treatment procedure.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :A61B 17/32
US CL :606/170, 180

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 606/170, 171, 180

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ----- Y	US 5,383,884 A (SUMMERS) 24 January 1995, see entire document.	1,2,4-8,12, 16-19, 21- 23, 25,27, 28 ----- 3 , 9 - 1 1 , 1 3 - 15,20,24, 26, 29-40
A	US 5,569,178 A (HENLEY) 29 October 1996, see entire document.	1-40
Y	US 5,925,056 A (THOMAS et al) 20 July 1999, see entire documnet.	1-40
Y	US 6,001,112 A (TAYLOR) 14 December 1999, see entire document.	1-40

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or, which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
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