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(54) **ENDOGRAFT DEVICES AND METHODS TO USE THE SAME**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,954,129 A * 9/1990 Giuliani A61M 25/0023 604/131
5,316,023 A 5/1994 Palmaz et al.

(Continued)

FOREIGN PATENT DOCUMENTS

WO WO 01/82833 11/2001
WO WO 2008/091561 7/2008

OTHER PUBLICATIONS

International Searching Authority, International Search Report, mailed Apr. 6, 2011 (PCT/US2011/023915).

(Continued)

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(57) **ABSTRACT**

Various endograft assemblies and methods for using the same. In at least one embodiment of an endograft assembly of the present disclosure, the endograft assembly comprises an endograft and a tube defining one or more tube openings coupled to said endograft. In another embodiment of an endograft assembly of the present disclosure, the endograft assembly comprises an endograft, a sponge sheath coupled to the endograft, and a reservoir bag coupled to the sponge sheath, said reservoir bag capable of receiving fluid from the sponge sheath.

20 Claims, 15 Drawing Sheets

