Title: CANNULA WITH FLOW DIVERSION MECHANISM AND METHODS OF USE

Abstract: A cannula (10) is described that includes a diverter mechanism in the form of a blast plate (20) deployable from within the lumen (13) of the cannula (10) and retractable from the lumen (13) of the cannula (10). The blast plate (20) may take the form of a planar surface, a curved surface, a membrane mounted on a wire ring, or a conical sleeve, or any other suitable shape. In use, the cannula (10) is inserted in a vessel (99), the blast plate (20) is deployed in the lumen (13) of the cannula (10), and blood flow is passed through the cannula (10) against the blast plate (20). Alternative devices and methods are also described.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : A61M 29/00
   US CL : 006/200
   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)

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

   Electronic database consulted during the international search (name of database and, where practicable, search terms used)
   none

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>US 5,846,260 A (Maahs) 08 December 1998, see entire document.</td>
<td>1-32</td>
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<tr>
<td>A</td>
<td>US 5,989,281 A (Barbut et al) 23 November 1999, see entire document.</td>
<td>1-32</td>
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<td>A</td>
<td>US 6,007,557 A (Ambrisco et al) 28 December 1999, see entire document.</td>
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<tr>
<td>A</td>
<td>US 6,090,097 A (Barbut et al) 18 July 2000, see entire document.</td>
<td>1-32</td>
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☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search: 02 SEPTEMBER 2002
Date of mailing of the international search report: 15 JAN 2003

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Form PCT/ISA/210 (second sheet) (July 1998)
B. FIELDS SEARCHED
Minimum documentation searched
Classification System: U.S.