

Title (en)
CARDIOVASCULAR CATHETER APPARATUS AND CATHETER POSITIONING METHOD USING TISSUE TRANSILLUMINATION

Title (de)
KARDIOVASKULÄRE KATHETERVORRICHTUNG UND VERFAHREN ZUR POSITIONIERUNG EINES KATHETERS UNTER VERWENDUNG DER GEWEBEBELEUCHTUNG

Title (fr)
CATHETER CARDIO-VASCULAIRE ET PROCEDE DE MISE EN PLACE DE CATHETER A L'AIDE DE LA TRANSILLUMINATION DE TISSUS

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Application
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Abstract (en)
[origin: WO9964099A1] Arterial and venous cannulas or catheters are described incorporating means for tissue transillumination for positioning and for monitoring of the device within a blood vessel throughout a surgical procedure without expensive imaging equipment or ionizing radiation and without inconveniencing or complicating the procedure. Detailed descriptions of particular embodiments include: a single balloon catheter or cannula configured with optical fibers for tissue transillumination, a single balloon catheter or cannula configured with light emitting diodes or laser diodes for tissue transillumination, a single balloon catheter or cannula configured with battery powered light emitting diodes or laser diodes for tissue transillumination, a catheter or cannula with two selectively expandable external catheter valves configured for tissue transillumination, a single-balloon aortic catheter deployed within a patient's aorta via peripheral arterial access, a double-balloon aortic catheter for selective aortic perfusion of a patient's circulatory system, a two-valve aortic catheter for selective aortic perfusion, a two-lumen, double-balloon venous drainage cannula for isolated venous drainage of a patient's inferior and superior vena cava and a single-lumen, two-stage venous drainage cannula for simultaneous drainage of a patient's inferior and superior vena cava. Additional illumination means are described that can be used with any of the embodiments of catheters and cannulas. Included among these is a separate transillumination device in the form of a stylet or guidewire that is insertable into or through a lumen of the catheter or cannula.

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