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|  |  | Features | Images/Results |
| 1 | Balloon Sizing of Valve Annulus for Percutaneous Valves | The device comprises an elongated body extending from a proximal end to a distal end and having a lumen therethroughs, a balloon positioned along the elongated body at or near the distal end, a detector and a pressure transducer positioned along the elongated body within the balloon, and a suction/infusion port defined within the elongated body within the balloon. |  |
| 2 | Catheter-based Heart Valve Therapy System with Sizing Balloon | A catheter-based heart valve therapy system, includes a stented heart valve prosthesis including a stent frame having a valvular contact region that is configured to make contact with a heart valve and nearby anatomy of a patient. A sizing balloon includes a first region having a shape in an inflated state that matches a shape of the valvular contact region of the stent frame in an expanded state. |  |
| 3 | Balloon Catheter with Integrated Optical Sensor for Determining Balloon Diameter | An optical sensor includes an elongated optical fiber with at least one diffraction grating formed in a core of a distal portion thereof. The fiber distal portion is coupled to the inflatable balloon. Broadband light is transmitted to the diffraction grating by an optical interrogator. A portion of the light is reflected from the diffraction grating and is received by a wavelength detector. |  |
| 4 | Fluid Occluding Devices and Methods | The method includes the steps of selecting an inflatable element such that diameter of the inflated inflatable element is greater than the diameter of the blood vessel being imaged, introducing the inflatable element into the blood vessel and underinflating the inflatable element such that the vessel wall is not substantially deformed by the inflatable element, the inflatable element substantially occluding the blood vessel to reduce imaging distortion resulting from vessel fluids. |  |
| 5 | Two-step heart valve implantation | A two-part implantable heart valve and procedure are disclosed that allow expansion and positioning of a first part of the implantable heart valve having a temporary or transient valvular structure. A second part of the implantable heart valve is deployed within the first part and attaches thereto. The valvular structure of the second part then acts to function as the heart valve replacement. A tool or system is provided for determining an adequate percutaneous heart valve size for a given stenotic valve. A balloon can be inflated inside the stenotic valve to a desired pressure. |  |