

# STATEMENT ON INTRAVASCULAR CATHETERIZATION PROCEDURES

Committee of Origin: Economics

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A number of patients undergoing anesthesia for various surgical procedures require a more precise and sophisticated level of cardiovascular monitoring than can be obtained from standard, noninvasive techniques. Placement of an arterial catheter, central venous catheter and/or flow directed pulmonary artery catheter may be required to obtain additional and more precise information necessary for safe and effective anesthesia and life support in the perioperative period.

Although it is the position of the American Society of Anesthesiologists (ASA) that the **interpretation** of the data obtained from these “invasive” monitoring devices is accounted for in the usual anesthesia fee, their **placement** is not. As ASA has developed and refined its Relative Value Guide<sup>®</sup>, placement of invasive monitoring devices has not been factored in base unit values. In fact, the base unit values for many anesthesia codes in which invasive monitoring is now common were established prior to the use of invasive devices and have not been changed. Furthermore, inclusion of additional base units to account for invasive monitoring in some anesthesia codes and not in others would make the relative value system inconsistent.

The need to consider placement of invasive hemodynamic monitors as a separate service is also indicated because not all patients undergoing the same surgical procedure require the same degree of monitoring. The necessity for invasive monitoring is driven more by patient condition than by surgical procedure. For example, although most patients undergoing intestinal surgery do not require invasive monitoring, some do because of underlying cardiovascular disease or anticipated large fluid and blood loss during surgery. Similarly, most patients having carotid endarterectomy require an arterial catheter, but some who are more healthy than average do not.

## Use of invasive monitoring techniques:

1. **Arterial Catheter (CPT code 36620)** - Placement of a small catheter, usually in the radial artery, and connection of the catheter to electronic equipment allow for continuous monitoring of a patient’s blood pressure. Unstable patients undergoing surgery as a result of trauma or for intra-abdominal pathology frequently need this form of monitoring. Patients having cardiac, vascular, chest, spine and brain surgery are subject to rapid changes in blood pressure. Continuous monitoring greatly helps the anesthesiologist manage these patients safely. Arterial catheters also provide a reliable method for obtaining arterial blood samples frequently, thus facilitating proper management of blood gas, blood chemistry and coagulation abnormalities.
2. **Central Venous Catheter (36555 or 36556) For pressure monitoring, volume replacement or central drug infusion** - Placing a catheter and monitoring the pressure in a major vein returning blood to the heart allow the anesthesiologist to properly maintain and/or adjust a patient’s circulating blood volume. The technique is appropriately used for patients who experience significant blood or fluid loss during surgery. Additional indications for placement of a central venous catheter are to secure a reliable means for rapid administration of large volumes of fluid or blood, to provide access in the absence of peripheral venous access or to allow for administration of certain medications that are most safely and effectively administered directly into the central venous circulation.

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3. **Pulmonary Artery (Swan-Ganz) Catheter (93503)** - This multi-lumen catheter is placed through a major vein and directed by blood flow through the right side of the heart and into a pulmonary artery. It has the capability to monitor the function of both sides of the heart and the vasculature. It can also be used to measure the cardiac output (amount of blood being pumped by the heart per minute) as well as other important indicators of cardiovascular function. It is used for patients whose cardiac function is, or may be, compromised either prior to or during a surgical procedure. Also, certain pulmonary artery catheters allow the heart to be temporarily paced, which may be necessary in some patients with underlying cardiac rhythm disturbances.

### **Bundling Issues:**

1. Charges for insertion of invasive monitors are not a part of standard anesthesia fees. These procedures are appropriately billed in addition to those fees.
2. When placing a pulmonary artery catheter (93503), access to the central venous circulation is included. Code 36556 should not be used unless there is a specific indication or need for a separate and distinct central venous catheter introduced via a separate skin insertion site. See No. 4 below.
3. Occasionally a central venous catheter (36556) may be placed at the time of surgery and then later, perhaps postoperatively in the intensive care unit due to deterioration of the patient's condition, a pulmonary artery catheter (93503) may be indicated. In this circumstance, the procedures are performed at different times and as a result of changing patient condition. It would be appropriate to bill for both procedures.
4. Occasionally two separate access sites to the central circulation are required. One site is used for the measurement of cardiovascular function, the other dedicated to the administration of medications or fluids. This could result in charges for two 36556s or one 36556 and one 93503.
5. Occasionally a central venous catheter may be placed at the time of surgery at the request of the surgeon or another physician to facilitate postoperative management of the patient. In this circumstance placement is for the administration of intravenous nutrition, other medications such as antibiotics or chemotherapeutic agents, or for hemodialysis. This service is unrelated to the anesthetic and should be separately billable.
6. Arterial catheters (36620) allow monitoring of the systemic, not the central, circulation. Arterial catheter placement should never be considered to be bundled with procedures for monitoring the central circulation (36555, 36556 or 93503).
7. Medicare policy allows payment for placement of invasive monitoring catheters separate from and in addition to the usual payment for anesthesia services. Most private insurers do likewise.