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**FROM:** The American College of Surgeons (ACoS) Commission on Cancer (CoC), the National Program of Cancer Registries (NPCR) Center for Disease Control (CDC) National Program of Cancer Registries (NPCR), and the National Cancer Institute (NCI) Surveillance, Epidemiology, and End Results (SEER) Program

**RE: Coding Embolization**

ACoS CoC, NPCR CDC, and SEER NCI have collaborated to clarify and refine coding directives for tumor embolization and are jointly issuing the following instructions:

**Definitions:**

**Chemoembolization:** a procedure in which the blood supply to the tumor is blocked surgically or mechanically and anticancer drugs are administered directly into the tumor. This permits a higher concentration of drug to be in contact with the tumor for a longer period of time.

**Radioembolization:** embolization combined with injecting small radioactive beads or coils into an organ or tumor.

**Tumor embolization:** the intentional blockage of an artery or vein to stop the flow of blood through the desired vessel.

**Chemotherapy**

**NAACCR Name: RX Summ-Chemo**

**NAACCR Item #: 1390**

- Code as Chemotherapy when the embolizing agent(s) is a chemotherapeutic drug(s). Use *SEER RX* to determine whether the drugs used are classified as chemotherapeutic agents. Use codes 01, 02, 03 as specific information regarding the agent(s) is documented.

**Example:** The patient has hepatocellular carcinoma (primary liver cancer). From a procedure report: Under x-ray guidance, a small catheter is inserted into an artery in the groin. The catheter's tip is threaded into the artery in the liver that supplies blood flow to the tumor. Chemotherapy is injected through the catheter into the tumor and mixed with particles that embolize or block the flow of blood to the diseased tissue.

- Code as Chemotherapy, NOS when
  - The patient has primary or metastatic liver cancer AND
  - The only information about embolization is a statement that the patient had chemoembolization or embolization of the tumor in the liver

**Note:** For embolization for a tumor in a site other than liver, see the coding instructions for the data item Other Therapy.

## **Radiation Therapy**

### **Regional Treatment Modality**

#### **For CoC Registries:**

**NAACCR Name: Rad-Regional RX Modality**

**NAACCR Item #: 1570**

- Code as brachytherapy when the tumor embolization is performed using a radioactive agent or radioactive seeds. Use code 50.

*Note: For SEER Registries:* If this data item is not reported by a CoC hospital, SEER central registries can generate the code for this field by combining the information from the following two fields: Rad-BoostRXModality and Rad-Regional TXModality

**NAACCR Name: Rxsumm-Radiation**

**NAACCR Item #: 1360**

Code as Radioactive implants. Use code 2.

*Example:* Yttrium-90 microsphere radioembolization is an FDA approved, non-surgical procedure used to treat inoperable liver cancer. With yttrium-90 microsphere radioembolization, a catheter inserted through a tiny incision in the groin and threaded through the arteries until it reaches the hepatic artery. Once the catheter is properly placed in the hepatic artery, millions of tiny beads, or microspheres, which contain the radioactive element yttrium-90, are released into the blood stream. These microspheres lodge into the smaller blood vessels that feed the tumor. In addition to preventing blood flow to the tumor, the microspheres emit radiation that helps destroy the cancerous cells.

## **Other Therapy**

**NAACCR Name: RX Summ-Other**

**NAACCR Item #: 1420**

- Code as Other Therapy when
  - The embolization site is other than the liver AND
  - The only information about embolization is a statement that the patient had chemoembolization or embolization of the tumor
- Code as Other Therapy when tumor embolization is performed using alcohol as the embolizing agent. Use code 01.

*Note:* If the embolization is being done for a tumor in the liver, see the coding instructions for the data item Chemotherapy.

*Example:* For head and neck primaries: Ideally, an embolic agent is chosen that will block the very small vessels within the tumor but spare the adjacent normal tissue. Liquid embolic agents, such as ethanol or acrylic, and powdered particulate materials can penetrate into the smallest blood vessels of the tumor.

**Do not code** pre-surgical embolization of hypervascular tumors with particles, coils or alcohol. These pre-surgical embolizations are typically performed to make the resection of the primary tumor easier. Examples where pre-surgical embolization is used include meningiomas, hemangioblastomas, paragangliomas, and renal cell metastases in the brain.