

Real-World Peripheral Embolization Characteristics Among Medicare Patients

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BACKGROUND

- Peripheral embolization obstructs or reduces the rate of blood flow in the peripheral vasculature and has been used to stop bleeding and treat tumors
- Innovation in embolization devices has expanded the conditions for which embolization is used
- Little is known about the real-world practice patterns for embolization procedures and the patients receiving embolization treatment

METHODS

- Data source: Medicare Fee-for-Service (FFS) (2021 and 2022) and Medicare Advantage (MA) data (2021)
- Embolization procedures were identified with CPT codes 37241, 37242, 37243, and 37244
- Descriptive statistics were calculated to explore procedure characteristics and patient demographics

TABLE 1. TOP 10 MOST FREQUENTLY OCCURRING PRINCIPAL ICD 10 DIAGNOSIS CODE ASSOCIATED WITH AN EMBOLIZATION PROCEDURE

Principal ICD 10 diagnosis code	Description of diagnosis code	Number of visits	Percent of visits
C220	Liver cell carcinoma	19422	17.0%
K922	Gastrointestinal hemorrhage, unspecified	13127	11.5%
C787	Secondary malignant neoplasm of liver and intrahepatic bile duct	7161	6.3%
N401	Benign prostatic hyperplasia with lower urinary tract symptoms	6341	5.6%
I714	Abdominal aortic aneurysm, without rupture	4097	3.6%
R58	Hemorrhage, not elsewhere classified	3026	2.7%
I728	Aneurysm of other specified arteries	2603	2.3%
I723	Aneurysm and dissection of iliac artery	2491	2.2%
T82330A	Leakage of aortic (bifurcation) graft (replacement), initial encounter	2187	1.9%
K661	Hemoperitoneum	2185	1.9%

RESULTS

- A total of 113,955 embolization procedures were identified during the study period
- The most commonly occurring CPT codes in the study population were embolization for tumors, organ ischemia, or infarction (37243) and embolization for arterial or venous hemorrhage or lymphatic extravasation (37244); 38% and 37%, respectively
- Liver-related cancers (23%), hemorrhage (14%) and benign prostatic hyperplasia (6%) were the most commonly occurring diagnoses associated with an embolization claim
- Most procedures were performed in an inpatient hospital (30%), outpatient hospital (28%) or physician office (4%) setting
- Among the FFS embolization claims (N=76030), 81% of procedures were performed by radiologists
- 77% of procedures were performed on White patients, compared to Black, Asian, and Hispanic patients (12%, 3%, and 3%, respectively)
- Most embolization patients were male (63%)

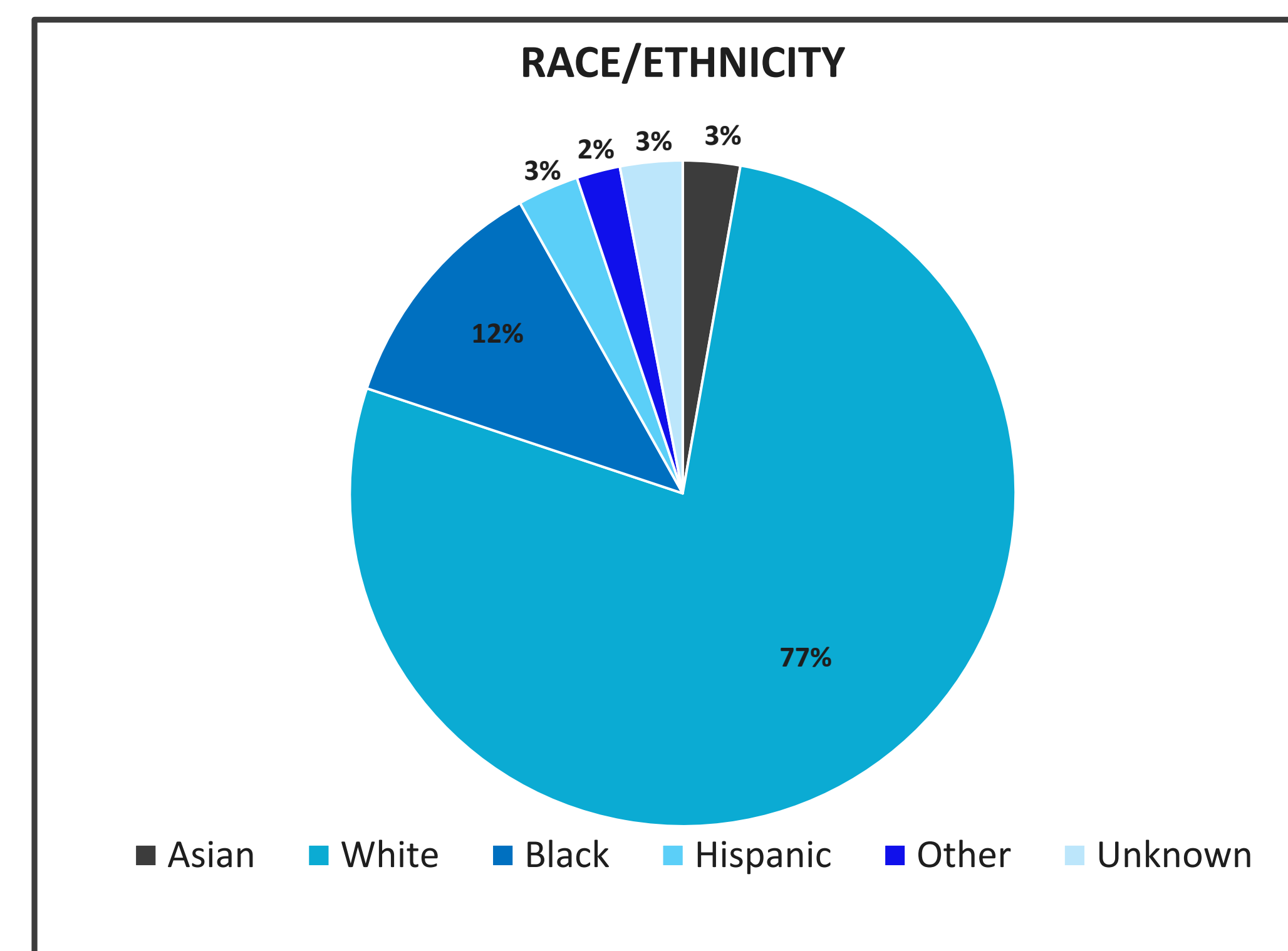
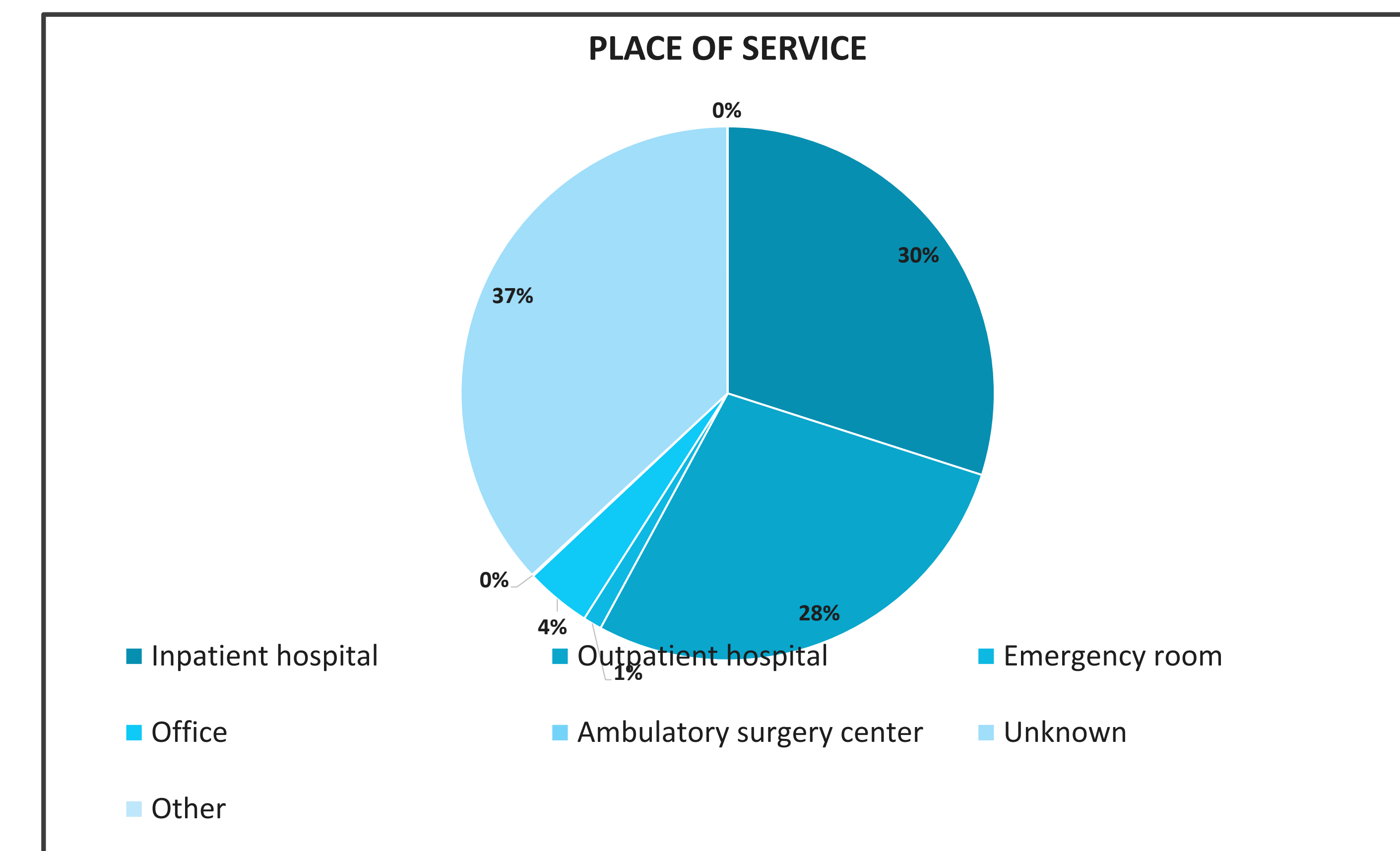


FIGURE 1. RACE/ETHNICITY OF PATIENTS RECEIVING EMBOLIZATION PROCEDURES

TABLE 2. TOP 10 MOST FREQUENTLY OCCURRING PHYSICIAN SPECIALTIES ASSOCIATED WITH AN EMBOLIZATION PROCEDURE

Physician specialty	Number of visits	Percent of visits
Diagnostic radiology	36555	32.1%
Interventional radiology	24738	21.7%
Vascular surgery	5934	5.2%
Unknown specialty	5359	4.7%
General surgery	621	0.5%
Interventional cardiology	546	0.5%
Cardiology	449	0.4%
Peripheral vascular disease	299	0.3%
Thoracic surgery	267	0.2%
Cardiac electrophysiology	246	0.2%

FIGURE 2. PLACE OF SERVICE OF EMBOLIZATION PROCEDURES



CONCLUSIONS

- Further research is needed to identify whether procedure characteristics vary based upon the condition for which embolization is performed and whether inequities exist between embolization use based on patient characteristics