

January 2024  
Coding Guide

Hospital  
Outpatient

Ambulatory  
Surgery Center

Physician  
Services

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## What are SIR-Spheres® yttrium-90 resin microspheres?

SIR-Spheres® yttrium-90 resin microspheres are microscopic spheres that are delivered via Selective Internal Radiation Therapy (SIRT) to liver tumors. The polymer microspheres with an average diameter of approximately 32.5 microns, are loaded with yttrium-90 (Y-90). After administration to the hepatic artery, SIR-Spheres yttrium-90 resin microspheres lodge preferentially in the vasculature of the tumor. The beta radiation remains localized, penetrating a mean of 2.5 mm in the tissue, destroying the tumor cells. Due to the half-life of 64.1 hours, most radiation (94%) is delivered in 11 days. The microspheres are biologically inert and are not metabolized or excreted. Each vial is for a single patient use.

SIR-Spheres yttrium-90 resin microspheres are the ONLY fully FDA PMA approved yttrium-90 microspheres for the treatment of mCRC in the liver.<sup>1,2,3</sup>

Delivered through the hepatic artery, SIR-Spheres yttrium-90 resin microspheres directly target liver tumors with yttrium-90 beta radiation, minimizing healthy tissue exposure.

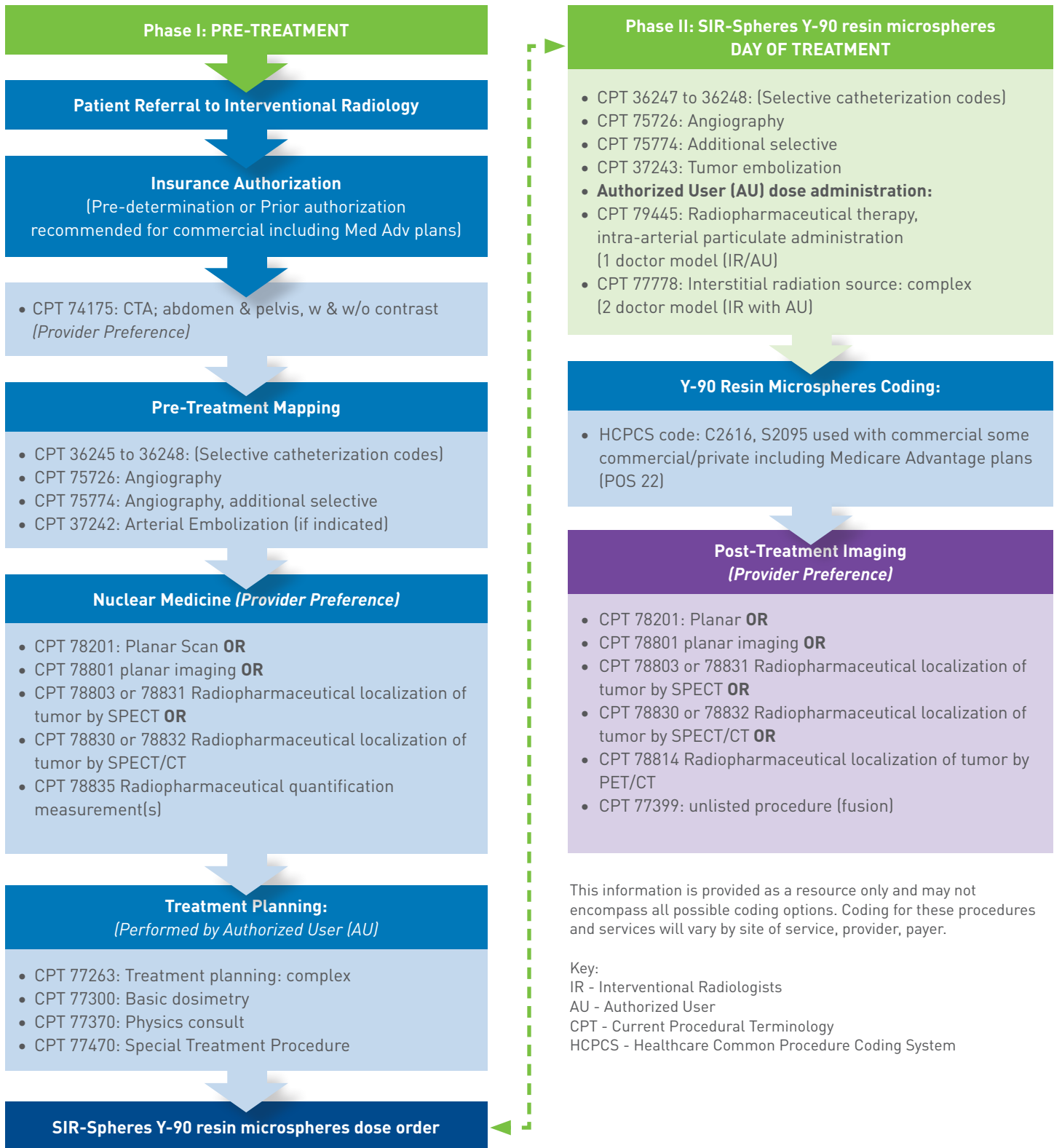
### SIR-Spheres Y-90 resin microspheres

Microsphere material	Biocompatible Polymer
Isotope	Yttrium-90 permanently bound to the microspheres
Diameter	~32.5 µm
Penetration in tissue	2.5 mm mean; 11 mm maximum range
Half life	64.1 hours; 94% of the radiation decayed in 11 days
How supplied	3 GBq or 81 mCi per vial +/- 10% at the time of calibration
Number of particles per vial	40-80 million

**Caution:** Federal (USA) law restricts this device to sale by or on the order of a physician. **Indications for Use:** SIR-Spheres Y-90 resin microspheres are indicated for the treatment of unresectable metastatic liver tumors from primary colorectal cancer with adjuvant intrahepatic artery chemotherapy (IHAC) of FUDR (Floxuridine). **Warnings / Precautions:** Inadvertent delivery of the microspheres to locations other than the intended hepatic tumor may result in local radiation damage. Due to the radioactivity and the significant consequences of misplacing the microspheres in situ, this product must be implanted by physicians who have completed the Sirtex TEC training program. A SPECT scan of the upper abdomen immediately after implantation is recommended. Patients may experience abdominal pain immediately after administration and pain relief may be required. H-2 blocking agents may be administered the day before implantation and continued as needed to reduce gastric complications. **Side Effects:** Common side effects are fever, transient decrease of hemoglobin, mild to moderate abnormality of liver function tests, abdominal pain, nausea, vomiting, and diarrhea. Potential serious effects due to exposure to high radiation include acute pancreatitis, radiation pneumonitis, acute gastritis, radiation hepatitis, and acute cholecystitis. **Contraindications:** SIR-Spheres Y-90 resin microspheres should not be implanted in patients who have either had previous external beam radiation therapy to the liver; ascites or are in clinical liver failure. This device is contraindicated in patients with markedly abnormal synthetic and excretory liver function tests; greater than 20% lung shunting of the hepatic artery blood flow, or >30 Gy radiation absorbed dose to the lungs, as determined by the 99mTc MAA scan; disseminated extra-hepatic malignant disease, and portal vein thrombosis. This device should not be implanted in patients determined via angiogram to have an abnormal vascular anatomy that would result in significant reflux of the hepatic arterial blood flow to the stomach, pancreas, or bowel. **General Information:** SIR-Spheres Y-90 resin microspheres may only be distributed to a duly licensed or accredited facility capable of handling therapeutic medical isotopes. This product is radioactive and should thus be handled in accordance with all applicable standards and regulations. **Consult the Instructions for Use (www.sirtex.com) for a complete listing of indications, contraindications, side effects, warnings, and precautions.**

# SIR-Spheres® yttrium-90 resin microspheres

## Patient Flow and Coding Reference



This information is provided as a guide for coding services involving SIR-Spheres Y-90 resin microspheres administration and is not intended to increase or maximize reimbursement by any payer. We suggest consulting your third-party payer organizations with regard to local coverage, coding and reimbursement policies. **Providers assume full responsibility for all reimbursement decisions or actions.** Current Procedural Terminology © 2024 American Medical Association. All Rights Reserved. HEPRA-US-001-02-24

# SIR-Spheres® yttrium-90 resin microspheres

## Coding and Medicare National Average Reimbursement

### 2024 Hospital Outpatient (OPPS), Ambulatory Surgery Center (ASC) and Physician Services (MPFS)

The SIR-Spheres yttrium-90 resin microspheres coding guide is designed to assist you with coding and billing for the SIRT yttrium-90 procedures. The outpatient codes and national average payments are based on the Medicare Hospital Outpatient Prospective Payment and Ambulatory Surgical Center Payment Systems and Quality Reporting Programs, 2024 Final Rule OPPS Addendum B and ASC Final Addenda. Medicare physician payment rates included in this coding guide are based on the 2024 Medicare Physician Fee Schedule as outlined in the Calendar Year 2024 Addendum B using 2024 Final MPFS conversion factor 32.7442.

Coding for administration of SIR-Spheres yttrium-90 resin microspheres can be complex. There is no consensus or consistency in the Coding/billing for the administration of SIR-Spheres yttrium-90 resin microspheres. This coding guide provides SIR-Spheres yttrium-90 resin microspheres Pre-Treatment and Day of Treatment coding options. Payer policies should be reviewed for coverage and coding guidelines. All rates shown are 2024 Medicare national averages; actual rates will vary geographically and/or by individual facility.

#### FDA LABELED INDICATIONS FOR USE

**SIR-Spheres yttrium-90 resin microspheres: Colorectal cancer metastasized to the liver in combination with hepatic arterial chemotherapy (FUDR) – Full PMA approval**

#### Payment:

##### Centers for Medicare and Medicaid Services (CMS)

SIR-Spheres yttrium-90 resin microspheres are eligible for payment under the Medicare Hospital Outpatient Prospective Payment System (OPPS). Effective January 1st each year, the OPPS reimbursement rate may be adjusted based upon hospital cost reports. SIR-Spheres yttrium-90 resin microspheres are paid separately from the facility technical charges as mandated by the 2003 Medicare Modernization Act.

HCPCS	Descriptor	APC / Status Indicator	Hospital Outpatient APC Payment (Jan 1, 2024)	Ambulatory Surgery Center Payment (Jan 1, 2024)
C2616	Yttrium-90 non-stranded	2616 / U	17,177.01	\$17,177.71

#### Medicare Overview and Coverage Policies:

Medicare patients have the option of enrolling in either traditional fee-for-service Medicare or Medicare Advantage plans. Traditional fee-for-service Medicare provides eligible beneficiaries with medical benefits through Medicare Parts A and B. Medicare Part B covers medically necessary services rendered in hospital outpatient facilities and freestanding physician offices. Medicare's managed care option, or Medicare Advantage (MA), is also known as Medicare Part C. Commercial plans contract with the Medicare program to offer coverage to Medicare enrollees. Medicare Advantage plans must provide coverage that is equal to or greater than the coverage offered by the beneficiary's local traditional fee-for-service Medicare Administrative Contractor (MAC). SIR-Spheres® Y-90 resin microspheres are eligible for Medicare reimbursement. Local Medicare contractors have the ability to approve or deny coverage based on medical necessity, coding, and appropriate procedural documentation.

### Commercial Payers:

Reimbursement for SIR-Spheres® yttrium-90 resin microspheres by private payers will depend upon the payers coverage policy, medical necessity criteria and by your facilities contracted rates for individual plans. Commercial / Private Payer including Medicare Advantage plans insurance coverage varies between payers and their respective health plans. Coverage, coding, and reimbursement for SIR-Spheres Y-90 resin microspheres and related procedures should be confirmed with the payer to determine any applicable coverage policies or criteria prior to performing a procedure. Many national, regional, and local companies have determined SIR-Spheres Y-90 resin microspheres to be medically necessary. Pre-determination / prior authorization is recommended for most private insurance plans.

### State or Managed Medicaid:

Medicaid is a public insurance program funded jointly by federal and state governments that provides safety-net coverage mainly to low-income and disabled beneficiaries. Medicaid is run at the state level, and coverage and benefit requirements vary from state to state. States structure Medicaid as a fee-for-service program or contract with private companies that administer individual Medicaid managed care plans. Medicaid coverage for SIR-Spheres Y-90 resin microspheres and actual coverage amounts will vary by state and plan type (Managed Medicaid vs. State Medicaid). Most Managed Medicaid plans will determine reimbursement based upon the terms of the contracts with individual providers. You will need to contact your patient's state or Managed Medicaid plan to determine the actual reimbursement.

### Hospital Pre-determination Process / Prior Authorization:

Some commercial / private payer including Medicare Advantage plans, and State or Managed Medicaid plans may require providers to obtain a pre-determination or prior authorization for SIR-Spheres Y-90 resin microspheres coverage and related procedures. It is recommended that the coverage policies of your payer mix be researched and that applicable pre-determination requirements be understood PRIOR to treating the patient. Note: Obtaining a pre-determination / prior authorization is not a guarantee of coverage or payment. Coverage and payment determination can only be made at the time a claim is adjudicated.

### Medicare Place of Service Payment Methodology

Provider of Service	Place of Service Code	Medicare Payment Methodology
Hospital Outpatient	22	On Campus Hospital Outpatient Prospective Payment System (OPPS) payments made based on HCPCS codes under Ambulatory Payment Classifications (APC)
Ambulatory Surgery Center (ASC)	24	ASC payment rates may be a percentage of hospital outpatient APC payment rates; SIR-Spheres Y-90 resin microspheres are paid at 100% of APC payment rate

### ICD-10 Diagnosis Codes:

The following diagnosis code range is specific to colorectal cancer (SIR-Spheres® Y-90 resin microspheres is approved for colorectal cancer that has metastasized to the liver).

C18.0 – C18.9	Malignant neoplasm of colon
C19.0 – C20.0	Malignant neoplasm of rectum
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct

### Microspheres Coding:

The HCPCS codes used to report use of SIR-Spheres Y-90 resin microspheres to payers may vary by plan type and the site of service where treatment is rendered. The following codes may be appropriate depending on payer guidelines:

HCPCS	Descriptor	Payer(s)	
C2616	Brachytherapy source, non-stranded, yttrium-90, per source	Fee for service Medicare, some commercial / private payers including Medicare Advantage plans	Hospital outpatient 22 ASC 24
S2095	Transcatheter occlusion or embolization for tumor destruction, percutaneous, any method, using yttrium-90 microspheres	Some commercial / Anthem, BC/BS, United Healthcare including Medicare Advantage plans	Hospital outpatient 22 ASC 24

### Important Provider Notice:

National Correct Coding Initiative (NCCI) Edits may result in coding conflicts for various treatments and procedures. Providers should carefully review each quarter's NCCI edit updates. NCCI edits may be downloaded from the CMS website at: <http://www.cms.gov/NationalCorrectCodInitEd>.

# Coding options for SIR-Spheres® yttrium-90 resin microspheres Therapy Medicare January 2024

CPT Code <sup>4</sup>	APC <sup>5</sup>	CPT Description <sup>4</sup>	Facility Payment <sup>6</sup>		Physician Payment <sup>7</sup>
			Hospital Outpatient Department (HOPPS) POS 22	Ambulatory Surgery Center (ASC) POS 24	Physician in Facility Setting (MPFS) POS 22 & 24

## PHASE I: PRE-PLANNING – MAPPING CODES<sup>9</sup>

### Selective Catheterizations

36245	NA	Selective catheter placement; initial first order	Packaged	Packaged	\$225
36246	NA	Selective catheter placement; initial second order	Packaged	Packaged	\$242
36247	NA	; initial third order or more	Packaged	Packaged	\$285
36248	NA	; addl second order, third order and beyond	Packaged	Packaged	\$46

### Hepatic Angiogram

75726	5184	Angiography, visceral, radiological S&I	\$5,236	Packaged	\$90
75774	NA	Angiography, selective, radiological S&I	Packaged	Packaged	\$45

### Embolization (if indicated)

37242 <sup>10</sup>	5194 (J1*)	Arterial embolization or occlusion, inclusive of all radiological S&I; arterial other than hemorrhage or tumor	\$16,707	\$11,278	\$453
*NOTE: The APC J1 status indicator for CPT 37242 provides one bundled payment for all services provided in the facility setting considered integral, ancillary, supportive and/or adjunctive to the primary service (CPT 37242). <sup>5</sup> <b>If embolization is performed, all services provided on the same day of service will be packaged into the J1 APC payment for 37242.</b>					

### Treatment Planning – AU (Authorized User) Work

#### 3-D Post-Processing (for liver volume)

76376	N	3D Post Scan, not requiring image post-processing	Packaged	Packaged	\$9
76377	N	Cone Beam CT (Medicare NCCI edit with 78580)	Packaged	Packaged	\$37

#### CT Acquisition (may be billed in conjunction with CPT code 76377)

74170	5571	CT, abdomen; w & w/o contrast	\$175	\$95	\$64
74175	5571	CTA; abdomen & pelvis, w & w/o contrast	\$175	\$95	\$83

#### Pre-Treatment Imaging (provider preference)

78201	5592	Liver imaging, static	\$515	\$280	\$19
78801	5591	Radiopharmaceutical localization Planar Imaging	\$393	\$214	\$33
78803	5593	Radiopharmaceutical localization of tumor Single Area (SPECT)	\$1,353	\$737	\$48
78830	5593	SPECT - CT Single Area	\$1,353	\$737	\$65
78831	5593	Radiopharmaceutical localization of tumor >2 areas (SPECT)	\$1,353	\$737	\$82
78832	5594	SPECT - CT >2 areas	\$1,491	\$812	\$93
78835	N	Radiopharmaceutical quantification measurement(s)	Packaged	Packaged	\$20
A9540 <sup>13</sup>	NA	Technetium 99m macroaggregated albumin (MAA)	Packaged	Packaged	NA

<sup>^</sup>OPPS capped payment applied in the freestanding facility



# Coding options for SIR-Spheres® yttrium-90 resin microspheres Therapy

## Medicare January 2023

CPT Code <sup>4</sup>	APC <sup>5</sup>	CPT Description <sup>4</sup>	Facility Payment <sup>6</sup>		Physician Payment <sup>7</sup>
			Hospital Outpatient Department (HOPPS) POS 22	Ambulatory Surgery Center (ASC) POS 24	Physician in Facility Setting (MPFS) POS 22 & 24
<b>PHASE II: DAY OF TREATMENT (Administration / Implant)<sup>9</sup></b>					
<b>Selective Catheterizations</b>					
36247	NA	Selective catheter placement; initial third order or more	Packaged	Packaged	\$285
36248	NA	; additional second order, third order and beyond	Packaged	Packaged	\$46
<b>Hepatic Angiogram</b>					
75726	5184	Angiography, visceral, radiological S&I	\$5,236	Packaged	\$90
75774	NA	Angiography, selective, radiological S&I	Packaged	Packaged	\$45
<b>Coding Options for Billing of Sources (Yttrium-90 Microspheres – non stranded)</b>					
C2616	2616	Brachytherapy source [yttrium-90 non stranded] (Medicare)	\$17,177	\$17,177	NA
S2095	NA	Transcatheter embo for tumor destruction using yttrium-90 microspheres	Contracted Price	Contracted Price	NA
<b>Tumor Embolization</b>					
37243	5193 [J1*]	Vascular embolization or occlusion, inclusive of all radiological supervision and interpretation, intraprocedural roadmapping, and imaging guidance necessary to complete the intervention; for tumors, organ ischemia, or infarction	\$10,482	\$4,847	\$532
		*NOTE: The APC J1 status indicator for CPT 37243 provides one bundled payment for all services provided in the facility setting considered integral, ancillary, supportive and/or adjunctive to the primary service (CPT 37243).			
<b>Microspheres Administration: Authorized User Codes (AU)</b>					
77263 <sup>11</sup>	NA	Treatment Planning; complex	NA	NA	\$164
77370 <sup>11</sup>	5611	Special Medical Radiation Physics Consultation	\$129	\$70	NA
77470 <sup>12</sup>	5623	Special Treatment Procedure	\$561	\$69	\$104
77300	5611	Basic Dosimetry Calculation	\$129	\$43	\$32
79445 <sup>14</sup>	5661	Radiopharmaceutical therapy, intra-arterial particulate admin (1 doctor model (IR/AU))	Packaged	\$129	\$105
77778 <sup>14</sup>	5624	Interstitial radiation source application; complex (2 Doctor model IR with separate AU)	Packaged	\$372	\$449
77399	5611	Unlisted procedure medical radiation physics, dosimetry (fusion)	\$129	\$70	Carrier Determined
<b>Post-Treatment Imaging (provider preference)</b>					
74170	5571	CT, abdomen; w & w/o contrast	\$175	\$95	\$64
74175	5571	CTA; abdomen & pelvis, w & w/o contrast	\$175	\$95	\$83
78201	5593	Liver imaging, static	\$515	\$280	\$19
78801	5591	Radiopharmaceutical localization Planar Imaging	\$393	\$214	\$33
78803	5593	Radiopharmaceutical localization of tumor Single Area (SPECT)	\$1,353	\$737	\$48
78814	5594	Radiopharmaceutical localization of tumor by PET/CT	\$1,491	\$812	\$98
78830	5593	SPECT - CT Single Area	\$1,353	\$737	\$65
78831	5593	Radiopharmaceutical localization of tumor >2 areas (SPECT)	\$1,353	\$737	\$82
78832	5594	SPECT - CT >2 areas	\$1,491	\$812	\$93

This information is provided as a guide for coding services involving SIR-Spheres Y-90 resin microspheres administration and is not intended to increase or maximize reimbursement by any payer. We suggest consulting your third-party payer organizations with regard to local coverage, coding and reimbursement policies. **Providers assume full responsibility for all reimbursement decisions or actions.** Current Procedural Terminology © 2024 American Medical Association. All Rights Reserved. HEPPRA-US-001-02-24


## References

1. Gray et al. *Ann Oncol* 2001;12:1711–20
2. van Hazel et al. *J Surg Oncol* 2004;88:78–85
3. Hendlisz et al. *J Clin Oncol* 2010;28:3687–94
4. CPT Copyright 2023 American Medical Association. All rights reserved. CPT® is a registered trademark of the American Medical Association. Note: Some CPT descriptors have been shortened for purposes of brevity. See your CPT Guide for full descriptors and coding guidelines.
5. APC Group/Status Indicators:
  - J1: Comprehensive APC – accounts for all costs and services typically involved in the provision of the complete primary procedure (including all secondary services performed on the day of the comprehensive service with status indicators N, Q, S, T, etc.)
  - N: Payment packaged into payment for other services; no separate APC payment.
  - NA: Code not applicable for payment in the OPFS;
  - Q2/T: Packaged APC payment if billed on the same date of service as a HCPCS code assigned status indicator “T” or “J1”. In other circumstances, payment is made through a separate APC payment.
6. The codes and national average payment rates shown are reflective of the Medicare Hospital Outpatient Prospective Payment and Ambulatory Surgical Center Payment Systems and Quality Reporting Programs, 2024 Final Rule Correction Notice, OPFS Addendum B and ASC Final Addenda. Payment rates do not reflect sequestration reductions.
7. The codes and national average payment rates shown are reflective of the 2024 Medicare Physician Fee Schedule as outlined in the Calendar Year 2024 Addendum B using 2024 Final MPFS conversion factor 32.7442.
8. Physician “Facility” payment refers to procedures performed in the facility setting (hospital or ASC); physicians receive payment under the Facility rate for services performed in the Facility site of service.
9. The possible coding options listed in this section are based on Medicare guidelines and society recommendations. Medicare base case coding scenarios typical for one mapping and one treatment in the hospital outpatient, ASC setting follow this section.
10. CPT 37242 is a device intensive code in the facility setting, must be reported with a device HCPCS code, or will be denied. If the payer does not accept the Y-90 source (C2616) as a device, then HCPCS C1889, implant/insertion of device, not otherwise classified, must be reported with the embolization code.
11. Use of this code requires a written order by the physician.
12. Used for brachytherapy and in circumstances requiring extra work over and above basic dosimetry calculation: Patient with previous chemo, receiving concurrent chemo, or external beam radiation to the body/liver. AU must review current CT scan, liver function studies and ECOG performance status to determinate % yttrium-90 dose to be adjusted taking into account previous treatments. Often used as a re-treatment code. Should be supported by clinical treatment note.
13. Do NOT code CPT 79445 for the injection of TC99 MAA on the mapping day as this is considered part of the nuclear medicine exam.
14. The physician will bill either 79445 or 77778, whichever is most appropriate per the physician and role in the procedure. Medicare NCCI edit with 37243.
15. Medicare bundles CPT 77790 with all brachytherapy services such as with CPT 79445.



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