PART 1: INTRODUCTION

Medicare and most other third-party insurance payers use ICD-9-CM and HCPCS (Health Care Procedural Coding System) and/or CPT® (Current Procedural Terminology) coding systems to determine appropriate payment, evaluate utilization of health care services and forecast health care trends. ICD-9-CM codes describe diagnoses or the reasons for patient encounters. HCPCS (including CPT) codes indicate what services were performed (under what circumstances) and what resources (eg, drugs, supplies, etc.) were used.

In order for outpatient radiology services to be paid correctly, properly coded claims must be submitted linking ICD-9-CM diagnosis codes with HCPCS procedure codes. Optimizing reimbursement for radiology services requires:

- accurate and complete documentation of services rendered
- appropriate code assignment and valid charge capture
- logical fee structure
- efficient data-collection and information management processes
- knowledge of the relationship between coverage and payment policies

For outpatient radiology services, it is essential to understand Medicare fiscal intermediary/carrier payment rules for services provided. No book can adequately address all of the payment issues for the numerous existing third-party payers. While the trend is to try to standardize billing methodology, it is important that each payer be contacted for its unique requirements. Only with careful observation of payment trends and continuous inquiries about payment criteria will radiology administrators and billing staff be able to implement the most appropriate billing strategies and potentially improved reimbursement for outpatient radiology services.

Although getting paid for services is a key issue, do not become so overwhelmed with payment(s) that you code solely for the purpose of getting paid (ie, assigning a code without documentation to support it, just because it will get paid better). The goal should be to code accurately. Statistics are compiled based on codes submitted to aid in healthcare forecasting. If the codes are incorrect the data will be erroneous. Keep in mind that Medicare is constantly changing reimbursement based on past history. Payment for hospital outpatient radiology services presently is based on coding requirements implemented by Medicare on October 1, 1988. As payment methodologies such as ambulatory patient groups (APG's) evolve, inaccurate codes being reported today will affect payments to your institution well into the future.

The reimbursement policy focus of this manual is Medicare outpatient services. It is recognized that other third-party users may not provide payment under their programs for certain procedures and may independently establish policies and procedures for governing the manner in which the codes are used within their operations.

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Disclaimer

Radiology Coding and Reimbursement Issues is designed to offer basic information regarding coding and billing of radiology services using CPT®, HCPCS and ICD-9-CM coding systems. The information presented is based upon material obtained from the Centers for Medicare and Medicaid Services (CMS) (formerly known as Health Care Financing Administration or HCFA) and the experience and interpretations of the author. Every effort has been made to ensure the accuracy of the listings, and all information is believed reliable at the time of publication. Absolute accuracy cannot be guaranteed; however, and the author accepts no responsibility or liability with regard to errors, omissions, misuse or misinterpretation.

Additional Radiology Reference Material & Sources
Background

The implementation of a prospective payment system (PPS) for hospital outpatient services, or Ambulatory Payment Classifications (APCs) is the biggest change to impact hospital reimbursement in over a decade. APCs, implemented on August 1, 2000, replaced the earlier cost-based reimbursement payment methodology for outpatient services. The outpatient PPS was mandated by Congress in the Balanced Budget Act of 1997 (BBA-97), and modified in the Balanced Budget Refinement Act of 1999 (BBRA). It is estimated that PPS will save Medicare beneficiaries billions of dollars in coinsurance over the next several years, while assuring more accurate payments under Medicare. Hospitals should find the PPS less complicated than the previous system, with more predictable revenues. The system should also encourage hospitals to become more efficient, while continuing to provide quality care to patients.

Generally, the outpatient PPS applies to covered hospital outpatient services furnished by any hospital participating in the Medicare program. APCs also apply to partial hospitalization services provided by Community Mental Health Centers (CMHCs). Critical Access Hospitals, as well as certain hospitals in Maryland, will not be subject to the PPS system. APCs require no changes to the billing form; however, hospitals are required to include HCPCS codes and dates of service for all services in order to be paid correctly.

Components of Outpatient PPS

APC Groups and Packaging

There are 451 separate classifications. Each classification or group was established based on the premise that "the services within each group are comparable clinically and with respect to the use of resources." HCFA believes that grouping closely related services as defined by HCPCS codes and paying the median cost of the APC group for which those services are assigned will discourage upcoding. The payment established for each APC "packages" those items or services that are recognized as contributing to the cost of the procedures or services. These include operating, procedure or treatment room; recovery room; observation; anesthesia; medical/surgical supplies and equipment; surgical dressings; capital-related costs; intraocular lenses, costs incurred to procure donor tissue and, various incidental services such as venipuncture. In general, the cost of drugs, pharmaceuticals and biologicals are also packaged; however, additional payments for some of these items and certain high cost items may be available under the pass-through provision.

Adjustment for Area Wage Differences

The Balanced Budget Act of 1997 requires APC payments to be adjusted to reflect geographic differences in labor-related costs. Adjustments for differences will be based on the inpatient PPS wage index. Sixty percent (60%) of the APC payment rate is considered to represent labor-related costs and will be subject to the geographic adjustment.

Discounting for Surgical Procedures

Payments will be discounted for multiple procedures performed during a single operative session or when a surgical procedure has been terminated prior to completion. For multiple surgical procedures, the full amount will be paid for the procedure having the highest APC payment rate and 50% will be paid for all other procedures performed during the same surgical encounter.

The Health Care Financing Administration's long awaited final rules were published April 7, 2000 in the Federal Register. Many aspects of the final rule are consistent with the proposed Medicare regulations; however, several important modifications were introduced. The more significant changes that effect radiology and cardiology included –
1. Outlier adjustments,
2. Transitional pass-through for additional costs of innovative medical devices, drugs and biologicals.

**Outlier Adjustments**

Outlier adjustments were established to provide for payments above and beyond the outpatient PPS rates in situations where costs for providing such services are exceptionally high. Specifically, if a hospital's outpatient cost are greater than 2.5 times the adjusted PPS payment rate than the hospital is eligible for an outlier payment equal to 75% of costs above this threshold. The Balanced Budget Refinement Act of 1999 (BBRA) established limits for the aggregated outlier payments to all providers. For years prior to 2004, the projected aggregate outlier payments for any given year may not exceed 2.5% of total payments.

**Transitional Pass-Through Payments**

HCFA established that an additional payment (known as pass-through payments) should be made for certain drugs, biologicals and radiopharmaceuticals (orphan drugs, cancer therapy drugs, biologicals and brachytherapy devices) for a period specified to be no less than two (2) years and not to exceed three (3) years following the implementation date. These drugs must be defined as current or new. Current drugs refer to those drugs that were already eligible for payments on July 1, 2000. New drugs are defined as products that were not eligible for payment for outpatient services prior to January 1, 1997, and the cost for which is not insignificant compared to the APC payment to which it is assigned.

In order to avoid disincentives for using new technology, items that meet the following criteria will be eligible for pass-through payments:

- The item was not recognized for payment prior to 1997
- The item has been cleared or approved for use by the FDA
- The item is determined to be reasonable and necessary for the diagnosis or treatment of an illness
- The item is an integral and subordinate part of the procedure, is used for one patient, is implanted and remain with that patient after the procedure
- The cost of the item is "not significant" in relation to the APC payment in which the medical device is packaged
- The item is not depreciable
- The item is not a supply furnished incident to a service/procedure
- The item is used to replace human skin

Items eligible for transitional pass-through payments will be published and updated on a quarterly basis. Each item will be assigned it's own unique HCPCS code. Devices are identified by brand/trade name. In some instances specific model numbers are also included.
Limitation on Coinsurance

One of the important changes with the implementation of APCs is a provision to limit the patient's coinsurance for a given procedure. Specifically, the coinsurance for a given procedure cannot exceed the Medicare inpatient hospital deductible ($776 for year 2000) for that year. HCFA will apply the limitation to the wage adjusted coinsurance amount after Part B deductibles are taken into account.

The following table summarizes most of the common APCs for radiology and the surgical component of radiology services as of January 2002.

RADIOLOGY APCs

<table>
<thead>
<tr>
<th>APC</th>
<th>Group Title</th>
<th>Payment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0096</td>
<td>Non-Invasive Vascular Studies</td>
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<td>0157</td>
<td>Colorectal Cancer Screen: Barium Enema</td>
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<td>Miscellaneous Placement/Repositioning</td>
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<td>0260</td>
<td>Level I Plain Film Except Teeth</td>
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<td>Level II Plain Film Except Teeth</td>
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<td>0262</td>
<td>Plain Film of Teeth</td>
<td>$33.09</td>
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<td>0263</td>
<td>Level I Miscellaneous Radiology Procedures</td>
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<td>0264</td>
<td>Level II Miscellaneous Radiology Procedures</td>
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<td>0265</td>
<td>Level I Diagnostic Ultrasound Except Vascular</td>
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</tr>
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<td>0266</td>
<td>Level II Diagnostic Ultrasound Except Vascular</td>
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<td>0267</td>
<td>Vascular Ultrasound</td>
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<td>0269</td>
<td>Echocardiogram Except Transthoracic</td>
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<td>0270</td>
<td>Transthoracic Echocardiogram</td>
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<td>0271</td>
<td>Mammography</td>
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<td>Diagnostic Urogram</td>
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<td>0280</td>
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<td>Miscellaneous Computed Axial Tomography</td>
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<td>Computerized Axial Tomography with Contrast Material</td>
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<td>Magnetic Resonance Imaging &amp; Magnetic Resonance Angiography with Contrast Material</td>
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<td>0285</td>
<td>Position Emission Tomography (PET)</td>
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<td>0286</td>
<td>Myocardial Scans</td>
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<td>Complex Venography</td>
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<td>CT, Bone Density</td>
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<td>Needle Localization for Breast Biopsy</td>
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<td>Standard Non-imaging Nuclear Medicine</td>
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<td>Level I Diag. Nuclear Medicine Except Myocardial Scans</td>
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<td>0292</td>
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<td>0294</td>
<td>Level I Therapeutic Nuclear Medicine</td>
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<td>Level II Therapeutic Nuclear Medicine</td>
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<td>0296</td>
<td>Level I Therapeutic Radiologic Procedures</td>
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<td>0299</td>
<td>Miscellaneous Radiation Treatment</td>
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<td>Level I Radiation Therapy</td>
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<td>0301</td>
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<td>Level I Therapeutic Radiation Treatment Preparation</td>
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<td>0305</td>
<td>Level II Therapeutic Radiation Treatment Preparation</td>
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<td>0310</td>
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<td>0312</td>
<td>Radioelement Applications</td>
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<td>0313</td>
<td>Brachytherapy</td>
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<td>0314</td>
<td>Hyperthermic Therapies</td>
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<tr>
<td>0332</td>
<td>Computerized Axial Tomography and Computerized Angiography without Contrast Material</td>
<td>$164.93</td>
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Revised January 30, 2002
**Bracco Diagnostics Inc.**  
**Radiology Coding & Reimbursement Issues Guide**

| 0333 | Computerized Axial Tomography and Computerized Angiography without Contrast Material followed by Contrast Material Miscellaneous | $265.72 |
| 0335 | Magnetic Resonance Imaging Miscellaneous | $274.37 |
| 0336 | Magnetic Resonance Imaging & Magnetic Resonance Angiography without Contrast Material | $320.19 |
| 0337 | Magnetic Resonance Imaging & Magnetic Resonance Angiography without Contrast Material followed by Contrast Material | $434.72 |
| 0697 | Level II Echocardiogram Except Transesophageal | $105.88 |
| 0706 | New Technology - Level II ($0 - $50) | $25.00 |
| 0707 | New Technology - Level II ($50 - $100) | $75.00 |
| 0710 | New Technology - Level V ($500 - $1,000) | $875.00 |
| 0712 | New Technology - Level VII ($1,000 - $2,000) | $875.00 |

**SURGICAL APCs**

<table>
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<th>APC</th>
<th>Group Title</th>
<th>Payment Rate</th>
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<tr>
<td>0002</td>
<td>Fine Needle Biopsy/Aspiration</td>
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<td>0004</td>
<td>Level I Needle Biopsy/Aspiration Except Bone Marrow</td>
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<td>0005</td>
<td>Level II Needle Biopsy/Aspiration Except Bone Marrow</td>
<td>$205.14</td>
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<tr>
<td>0006</td>
<td>Level I Incision &amp; Drainage</td>
<td>$110.97</td>
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<td>0007</td>
<td>Level II Incision &amp; Drainage</td>
<td>$343.60</td>
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<td>0008</td>
<td>Level III Incision &amp; Drainage</td>
<td>$556.38</td>
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<td>0018</td>
<td>Biopsy of Skin/Puncture of Lesion</td>
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<td>0019</td>
<td>Level I Excision/Biopsy</td>
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<td>0020</td>
<td>Level II Excision/Biopsy</td>
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<td>0021</td>
<td>Level IV Excision/Biopsy</td>
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<td>0022</td>
<td>Level V Excision/Biopsy</td>
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<td>0028</td>
<td>Level I Breast Surgery</td>
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<td>0032</td>
<td>Insertion of Central Venous/Arterial Catheter</td>
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<td>0035</td>
<td>Placement of Arterial or Central Venous Catheter</td>
<td>$6.11</td>
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<td>0049</td>
<td>Level I Musculoskeletal Procedures Except Hand &amp; Foot</td>
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<td>0050</td>
<td>Level II Musculoskeletal Procedures Except Hand &amp; Foot</td>
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<td>0070</td>
<td>Thoracentesis/Lavage Procedures</td>
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<td>0072</td>
<td>Level II Endoscopy Upper Airway</td>
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<td>0073</td>
<td>Level III Endoscopy Upper Airway</td>
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<td>Endoscopy Lower Airway</td>
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<td>Non-Coronary Angioplasty or Atherectomy</td>
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<td>Thrombectomy</td>
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<td>Level I Vascular Ligation</td>
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<td>Vascular Repair/Fistula Construction</td>
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<td>0094</td>
<td>Resuscitation and Cardioversion</td>
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<td>Injection of Sclerosing Solution</td>
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<td>Miscellaneous Vascular Procedures</td>
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<td>Removal of Implanted Devices</td>
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<td>Transfusion</td>
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<td>Level I Tube Changes &amp; Repositioning</td>
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<td>0130</td>
<td>Level I Laparoscopy</td>
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<td>Level II Laparoscopy</td>
<td>$1,915.52</td>
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<tr>
<td>0139</td>
<td>Endoscopic Retrograde Cholangio-Pancreatography (ERCP)</td>
<td>$778.32</td>
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</tbody>
</table>
Calculation of Wage-Adjusted APC Payment Rates

The formula for calculating the APC payment rate in your locality is fairly simple.

\[
\text{Locality Pmt} = [(\text{National Payment Rate} \times 60\% \times \text{Wage Index}) + (\text{National Payment Rate} \times 40\%)]
\]

For Example:

Wage Index for Urban Area - Dallas, TX is 0.9913
APC 0005 Level II Needle Biopsy Natl. Payment Rate = $268.32

\[
Pmt = [(\$271.81 \times 60\% \times 0.9913) + (\$271.81 \times 40\%)]
\]
\[
Pmt = [(\$161.67) + (108.72)]
\]
\[
Pmt = $270.39
\]

Resources

APCs will continue to evolve over the next several years as changes are made. It will be extremely important to keep abreast of HCFA Program Memorandum. The following are just a few of our suggestions:

Federal Register, November 13, 2001, Part III - Department of Health & Human Services, Changes to the Hospital Outpatient Prospective Payment System for Calendar Year 2001; Final Rule, pages 59856-60125.
Freestanding Facilities/Physician Offices

As of January 1, 1992, payments for radiology services provided by physicians to Medicare beneficiaries became based on the fee schedule established by the resource-based relative value system (RBRVS). For each radiology procedure represented by a CPT code, a relative value has been assigned to its work, its related practice expense and its malpractice cost components. To account for geographical differences in practice costs, each of these components is multiplied by a geographic practice cost indices (GPCI). The three geographically adjusted values are added together, and the total multiplied by a conversion factor set by the Health Care Financing Administration (HCFA) resulting in a fee schedule payment limit for each procedure. This amount represents the maximum payment Medicare will allow for each procedure in a specific geographic area.

MEDICARE FEE SCHEDULE CALUATION

\[
\text{MEDICARE FEE SCHEDULE PAYMENT} = \left[ (\text{Work RVU} \times \text{Work GPCI}) + (\text{Practice Expense RVU} \times \text{Practice Expense GPCI}) + (\text{Malpractice Expense RVU} \times \text{Malpractice Expense GPCI}) \right] \times \text{Conversion Factor}
\]

For participating physicians, Medicare will pay up to 80 percent of the fee schedule amount for each medically necessary procedure performed. The patient is responsible for any deductible or co-payment (currently Medicare Part B co-payment is generally 20 percent of the allowed amount). The total payment made by Medicare and the patient cannot exceed the fee schedule amount.

For non-participating physicians, Medicare will pay up to 80 percent of the fee schedule amount. Again, the patient is responsible for the deductible and co-payment amounts. However, if the non-participating physician charges more than the Medicare fee schedule limit, the patient is not obligated to pay no more than 15 percent above the established fee limit without regard to the physician's actual charge.

Most radiology procedures include both a professional component and a technical component. The professional component (generally recognized with modifier '-26') comprises the physician's supervision and interpretation of the examination. This aspect is charged by the radiologist who performs work in the hospital setting, for example. The technical component describes the actual technical work (film, chemicals, technologist time, etc.). The sum of the two components is known as the global, which describes all of the resources used by a radiologist operating a freestanding center. It is important to recognize that some CPT codes include only a technical component or only a professional component. A few codes (e.g., the surgical portion of interventional procedures) do not have a breakdown of relative value units. The full fee is paid to the physician regardless of the site of service.

Procedures listed in the CPT "surgery" section are paid based only on a global component (both the hospital and the radiologist/physician bill for the global payment). When a physician performs more than one "surgical" procedure on the same patient on the same day, Medicare will pay the lower of the submitted charge or 100% of the fee schedule amount for the highest valued procedure. Second, third, fourth and fifth procedure payments will be based on the lesser of the submitted charge or 50% of the fee schedule amount. Subsequent procedures will be paid on a "by report" basis.
Coverage Issues

National versus Local Coverage Policy

Medicare's medical review policy is a composite of statutory provisions, regulations, nationally published Medicare coverage policies and local medical review policies. It the absence of federal statutory, regulatory or national medical coverage policy, carriers and fiscal intermediaries are permitted to develop local medical review policies to describe when and under what circumstances an item or service will be covered.

Fraud and Abuse

HCFA has made it clear that fraud and abuse investigation and enforcement will be a priority in the coming years. The government has new initiatives underway to fight these issues. Not only do they have increased funds and manpower at their disposal but the General Accounting Office (the branch of Congress charged with monitoring the use of public funds) has launched FraudNET, an on-line service "to facilitate reporting of allegations of fraud, waste, abuse or mismanagement of federal funds."

Make no mistake about it, in an environment of cost containment and shrinking resources, fraud and abuse enforcement is a major opportunity for the government to make some headway with reform. As Medicare and Medicaid dollars shrink, the pressure on providers to maximize their opportunities will increase the chance of doing something wrong in an effort to do something. There is no such thing as being over educated about how to avoid problems. The key is to understand that problems can arise for anyone and to develop organized strategies for avoidance.

Abuse

Abuse describes incidents or practices of providers, which although not typically considered fraudulent, are inconsistent with accepted and sound medical, business or fiscal practices. These practices may directly or indirectly result in unnecessary costs to the Medicare program. Such practices include improper payment for services which do not meet professionally recognized standards of care or which are not medically necessary.

Abuse includes payments made for services which there is no legal entitlement for such payments. Examples of abuse include, but are not limited to:

• excessive charges for services or supplies
• claims for services not medically necessary to the extent rendered
• breaches of assignment agreements wherein beneficiaries are billed for amounts not allowed
• improper billing practices, including such practices as: providers billing Medicare patients at a higher rate than non-Medicare patients; submission of bills to Medicare instead of third-party payers who are primary insurers.

Fraud

Fraud is defined as the intentional deception or misrepresentation that the individual makes, knowing it to be false and that could result in some unauthorized benefit to them. Most often, fraud arises from a false statement or misrepresentation which is material for payment by the Medicare program. The violator may be a provider, supplier, beneficiary or some other person or business entity.

Examples of fraud include, but are not limited to:

• billing for services or supplies not provided (this includes billing for "no shows or broken appointments")
• billing for medically unnecessary items or services (under Medicare, these are items or services that are not medically necessary to improve the patient's condition)
• offering or accepting referral fees (kickbacks) for another provider in exchange for referring patients
• misrepresentation of services rendered, amounts charged, identity of patients, dates of service, etc. (a physician bills for a higher level of service than was provided; a supplier delivers a basic wheelchair but...
actually bills for a more expensive model; or a laboratory charges for blood tests, but no tests were done)

• misrepresenting a patient's condition to get Medicare to pay for services

• upcoding (upgrading a service to receive a higher fee amount)
• routine waiver of deductibles and copayments
• deliberate application for duplicate reimbursement

The primary role of the Fraud Unit is to identify cases of suspected fraud and abuse and to develop and refer them to the Office of Inspector General for consideration and initiation of criminal, civil monetary penalty, or administrative sanctions.

The provider to whom payment is made is ultimately responsible for all practices and procedures that generate the payment, including all activities of billing clerks and billing agencies. Providers should establish appropriate business practices that avoid the potential for error by persons responsible for the submission of claim forms or electronic claims.

With the increased assault of Federal and State anti-kickback statutes, the federal False Claims Act, billing and claims requirements, self-referral acts, and pervasive fraud and abuse restrictions derivative of the Health Insurance Portability and Accountability Act of 1996, a new lexicon is added to our daily language: COMPLIANCE PLANS. The blueprint for a radiology compliance plan is beyond the scope of this book, however there are numerous resources available to work on this extensive project. These include:

• Compliance Program Guidelines for Radiologists and Radiation Oncologists, by the American College of Radiology, 1998.


• Numerous websites - [www.oig.hhs.gov](http://www.oig.hhs.gov) or [www.oig.hhs.gov/modcomp/index.htm](http://www.oig.hhs.gov/modcomp/index.htm)

**Physician Supervision of Diagnostic Tests**

Effective January 1, 1998 Medicare clarified their policy on physician supervision of diagnostic x-ray and other diagnostic tests payable under the physician fee schedule. "We are clarifying that some degree of physician supervision is required for every diagnostic test payable under the physician fee schedule with a few exceptions." Numerous questions/concerns arose regarding this proposal, so HCFA did not implement the proposed changes. New instructions were finally issued on April 19, 2001 in Program Memo. Transmittal B-01-28. This memo sets forth revised levels of physician supervision required for diagnostic tests payable under the Medicare physician fee schedule.

The regulation defines these levels of physician supervision for diagnostic tests as follows:

**General** supervision – means the "procedure is furnished under the physician's overall direction and control, but physician's presence is not required during the performance of the procedure. Under general supervision, the training of the non-physician personnel who actually performs the diagnostic procedure and the maintenance of the necessary equipment and supplies are the continuing responsibility of the physician."

**Direct** supervision – "in the office setting means the physician must be present in the office suite and immediately available to furnish assistance and direction throughout the performance of the procedure. It does not mean that the physician must be present in the room when the procedure is performed."

**Personal** supervision - means a "physician must be in attendance in the room during the performance of the procedure."
Appendix D is a summary of radiology CPT codes and their level of physician supervision. This list was updated with Program Memorandum Carriers, Transmittal B-01-28, April 19, 2001. ([www.hcfa.gov/pubforms/transmit/B0128.pdf](http://www.hcfa.gov/pubforms/transmit/B0128.pdf))

Part III: Managing the Chargemaster

What is a Chargemaster?

The process of maintaining your chargemaster directly affects the reimbursement your facility receives for outpatient services; therefore it is essential to manage and maintain its accuracy.

The chargemaster is a critical management tool. An accurate chargemaster provides several benefits: optimal reimbursement, improved data quality, and enhanced communication.

Optimal Reimbursement – An up to date chargemaster ensures optimal reimbursement for services rendered, increasing the profitability of your hospital. Also, it is an accurate measure of the services provided.

Improved Data Quality – It is essential to report accurate and complete procedures and supplies on claims and cost reports because insurance companies use this information to profile your hospital's services. The government and other third-party payers use this information to determine future reimbursement rates. If your historical data is incorrect, then payers may assign lower payment rates to your services.

In addition, improved data quality provides you (the manager) with a solid base for making decisions about your operations. This information directly relates to procedures performed, utilization of services, and the cost to provide these services. This data can support your ability to make sound management decisions, price services strategically, and use resources and manpower effectively.

Enhanced Communication – In order to maintain an up to date chargemaster, clinical departments, medical records, information systems, and the business office must communicate and interact. Be sure to involve anyone involved in the overall revenue generation, charge capture, and collection process. Improved communication leads each member to better appreciate the other part each department plays in the reimbursement process and to better understand how to correct problems, monitor quality issues, and track results.

The process of maintaining a clean chargemaster leads the administrative and medical staffs to a greater understanding of the relationship between proper coding and data quality and how that relationship affects reimbursement. In our rapidly changing health care environment, it is important to keep all appropriate staff members informed about current reimbursement trends, outpatient reimbursement management strategies, coding and reporting requirements, and the overall importance of data quality.

Once your chargemaster is updated, it is crucial that it be reviewed at the beginning of each year. Using a new CPT codebook, additions, deletions and modifications can be easily captured.

The hospital chargemaster is a computerized list of procedures, services, supplies and charges for your facility. Payment for radiology, laboratory and other diagnostic services is generally managed through the chargemaster. Some hospitals refer to the chargemaster as a price file, price master, service master, price list, etc. The primary function of the chargemaster is to accurately and to efficiently bill for the patient services rendered.

A typical chargemaster contains the following information:
• Department code - the department code refers to the specific ancillary department where the service is performed.

• Service code - internal identification of the specific service rendered

• Charge description - narrative description of the service, procedure or supply

• Revenue code - the revenue code, or UB-92 code, is assigned to each procedure, service or product

• Charge amount - the dollar amount the hospital charges for each specific procedure, service or supply

• Relative Value Units (RVU)
<table>
<thead>
<tr>
<th>CPT4 Code</th>
<th>Procedure Description</th>
<th>UB92 Code</th>
<th>Charge</th>
<th>RVU</th>
<th>2002 Global RVU</th>
</tr>
</thead>
<tbody>
<tr>
<td>71010</td>
<td>Chest, single view</td>
<td>324</td>
<td>73.95</td>
<td>1/5/02</td>
<td>0.72</td>
</tr>
<tr>
<td>71020</td>
<td>Chest, two views</td>
<td>324</td>
<td>94.65</td>
<td>1/5/02</td>
<td>0.93</td>
</tr>
<tr>
<td>71021</td>
<td>Chest, two views w/ apical lordotic</td>
<td>324</td>
<td>114.25</td>
<td>1/5/02</td>
<td>1.11</td>
</tr>
<tr>
<td>71034</td>
<td>Chest, two views w/ fluoroscopy</td>
<td>324</td>
<td>212.85</td>
<td>1/5/02</td>
<td>2.09</td>
</tr>
<tr>
<td>71035</td>
<td>Chest, special view (Bucky)</td>
<td>324</td>
<td>78.90</td>
<td>1/5/02</td>
<td>0.77</td>
</tr>
<tr>
<td>74240</td>
<td>Upper GI, w/o KUB</td>
<td>320</td>
<td>250.55</td>
<td>1/5/02</td>
<td>2.42</td>
</tr>
<tr>
<td>74241</td>
<td>Upper GI, with KUB</td>
<td>320</td>
<td>353.50</td>
<td>1/5/02</td>
<td>2.44</td>
</tr>
<tr>
<td>74245</td>
<td>Upper GI w/ small bowel</td>
<td>320</td>
<td>374.60</td>
<td>1/5/02</td>
<td>3.64</td>
</tr>
<tr>
<td>74247</td>
<td>Upper GI, air contrast, with KUB</td>
<td>320</td>
<td>273.05</td>
<td>1/5/02</td>
<td>2.65</td>
</tr>
<tr>
<td>74250</td>
<td>Small bowel series (separate procedure)</td>
<td>320</td>
<td>200.15</td>
<td>1/5/02</td>
<td>1.95</td>
</tr>
<tr>
<td>74270</td>
<td>Colon, barium enema</td>
<td>320</td>
<td>275.00</td>
<td>1/5/02</td>
<td>2.67</td>
</tr>
<tr>
<td>76700</td>
<td>U/S abdomen, complete</td>
<td>402</td>
<td>293.25</td>
<td>1/5/02</td>
<td>3.09</td>
</tr>
<tr>
<td>76705</td>
<td>U/S abdomen, limited</td>
<td>402</td>
<td>212.50</td>
<td>1/5/02</td>
<td>2.25</td>
</tr>
<tr>
<td>74400</td>
<td>IVP - intravenous pyelogram</td>
<td>320</td>
<td>224.00</td>
<td>1/5/02</td>
<td>2.37</td>
</tr>
<tr>
<td>74415</td>
<td>IVP (bolus) with tomograms</td>
<td>320</td>
<td>264.50</td>
<td>1/5/02</td>
<td>2.79</td>
</tr>
<tr>
<td>74420</td>
<td>Retrograde pyelogram</td>
<td>320</td>
<td>315.60</td>
<td>1/5/02</td>
<td>3.12</td>
</tr>
<tr>
<td>74425</td>
<td>Urography, antegrade, S&amp;I</td>
<td>320</td>
<td>183.25</td>
<td>1/5/02</td>
<td>1.81</td>
</tr>
<tr>
<td>50394</td>
<td>Inj. for pyelography thru nephrostomy or pyelostomy tube, or indwelling ureteral cath.</td>
<td>360</td>
<td>135.10</td>
<td>1/5/02</td>
<td>1.06</td>
</tr>
<tr>
<td>74430</td>
<td>Cystography, S&amp;I</td>
<td>320</td>
<td>153.65</td>
<td>1/5/02</td>
<td>1.50</td>
</tr>
<tr>
<td>74455</td>
<td>Urethrocystography, voiding, S&amp;I</td>
<td>320</td>
<td>206.65</td>
<td>1/5/02</td>
<td>2.04</td>
</tr>
<tr>
<td>51600</td>
<td>Injection procedure for cystogram</td>
<td>360</td>
<td>139.90</td>
<td>1/5/02</td>
<td>1.22</td>
</tr>
<tr>
<td>74450</td>
<td>Urethrocystography, retrograde, S&amp;I</td>
<td>320</td>
<td>194.95</td>
<td>1/5/02</td>
<td>2.02</td>
</tr>
<tr>
<td>51610</td>
<td>Injection procedure for urethrogram</td>
<td>360</td>
<td>221.90</td>
<td>1/5/02</td>
<td>1.44</td>
</tr>
<tr>
<td>43761</td>
<td>Gastric tube manipulation</td>
<td>360</td>
<td>215.00</td>
<td>1/5/02</td>
<td>2.94</td>
</tr>
<tr>
<td>50390</td>
<td>SP - renal cyst study</td>
<td>360</td>
<td>345.60</td>
<td>1/5/02</td>
<td>2.73</td>
</tr>
<tr>
<td>A4646</td>
<td>Isovue 370 - 50 mI</td>
<td>636</td>
<td>49.00</td>
<td>12/14/99</td>
<td></td>
</tr>
<tr>
<td>A4646</td>
<td>Isovue 300 - 50 mI</td>
<td>636</td>
<td>45.00</td>
<td>12/14/99</td>
<td></td>
</tr>
<tr>
<td>621</td>
<td>Biliary drainage set</td>
<td>621</td>
<td>269.00</td>
<td>9/8/98</td>
<td></td>
</tr>
<tr>
<td>621</td>
<td>Biliary stent</td>
<td>621</td>
<td>157.00</td>
<td>9/8/98</td>
<td></td>
</tr>
<tr>
<td>78300</td>
<td>Bone scan, limited area</td>
<td>340</td>
<td>553.95</td>
<td>1/5/02</td>
<td>3.35</td>
</tr>
<tr>
<td>78306</td>
<td>Bone scan, whole body</td>
<td>340</td>
<td>910.75</td>
<td>1/5/02</td>
<td>5.45</td>
</tr>
<tr>
<td>78320</td>
<td>Bone scan, SPECT</td>
<td>340</td>
<td>1230.10</td>
<td>1/5/02</td>
<td>7.34</td>
</tr>
<tr>
<td>A4641</td>
<td>Choletec (up to 10 mCI)</td>
<td>340</td>
<td>99.00</td>
<td>1/1/00</td>
<td></td>
</tr>
<tr>
<td>A4641</td>
<td>99M-Technetium 1-30 mCI</td>
<td>340</td>
<td>117.00</td>
<td>1/1/99</td>
<td></td>
</tr>
<tr>
<td>A9505</td>
<td>201-Thallous Chloride per mCI</td>
<td>340</td>
<td>103.50</td>
<td>1/1/99</td>
<td></td>
</tr>
<tr>
<td>70551</td>
<td>MRI Brain without contrast</td>
<td>611</td>
<td>1336.55</td>
<td>1/5/02</td>
<td>13.20</td>
</tr>
<tr>
<td>70552</td>
<td>MRI Brain with contrast</td>
<td>611</td>
<td>1604.95</td>
<td>1/5/02</td>
<td>15.84</td>
</tr>
<tr>
<td>70553</td>
<td>MRI Brain with &amp; without contrast</td>
<td>611</td>
<td>1887.25</td>
<td>1/5/02</td>
<td>28.02</td>
</tr>
<tr>
<td>72131</td>
<td>CT Lumbar spine w/o contrast</td>
<td>350</td>
<td>761.70</td>
<td>1/5/02</td>
<td>7.49</td>
</tr>
<tr>
<td>72132</td>
<td>CT Lumbar spine with contrast</td>
<td>350</td>
<td>855.50</td>
<td>1/5/02</td>
<td>8.73</td>
</tr>
<tr>
<td>72133</td>
<td>CT Lumbar spine w/o &amp; with contrast</td>
<td>350</td>
<td>1069.25</td>
<td>1/5/02</td>
<td>11.08</td>
</tr>
</tbody>
</table>
Part IV: Revenue Codes

For hospital billings, all line item charges must be identified as to the type of service. HCFA uses the revenue code system to identify broad classifications of services within defined areas of the hospital, for cost reporting services. Revenue codes are three-digit codes used to classify types of services. The revenue codes have no relationship with where procedures are performed.

Revenue codes are among the data points around which Medicare monitors and reports all outpatient radiology services through the PS&R report. Revenue codes affect the final payment for radiology services, so hospital personnel who work with and understand the year-end cost report usually assign them.

HCPCS codes for radiology services must be reported in tandem with specified revenue codes. This revenue/procedure code relationship must be met for hospital radiology services billing to be accepted for payment by Medicare.

The following revenue codes are those most commonly used to categorize and report outpatient radiology services.

<table>
<thead>
<tr>
<th>Rev Code</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>320</td>
<td>Radiology-Diagnostic-General</td>
</tr>
<tr>
<td>321</td>
<td>Radiology-Diagnostic-Angiocardiology</td>
</tr>
<tr>
<td>322</td>
<td>Radiology-Diagnostic-Arthrography</td>
</tr>
<tr>
<td>323</td>
<td>Radiology-Diagnostic-Arteriography</td>
</tr>
<tr>
<td>324</td>
<td>Radiology-Diagnostic-Chest X-ray</td>
</tr>
<tr>
<td>329</td>
<td>Radiology-Diagnostic-Other</td>
</tr>
<tr>
<td>330</td>
<td>Radiology-Therapeutic-General</td>
</tr>
<tr>
<td>333</td>
<td>Radiology-Therapeutic-Radiation Therapy</td>
</tr>
<tr>
<td>339</td>
<td>Radiology-Therapeutic-Other</td>
</tr>
<tr>
<td>340</td>
<td>Nuclear Medicine-General</td>
</tr>
<tr>
<td>341</td>
<td>Nuclear Medicine-Diagnostic</td>
</tr>
<tr>
<td>342</td>
<td>Nuclear Medicine-Therapeutic</td>
</tr>
<tr>
<td>349</td>
<td>Nuclear Medicine-Other</td>
</tr>
<tr>
<td>350</td>
<td>Computerized Axial Tomography-General</td>
</tr>
<tr>
<td>351</td>
<td>CT Scan-Head Scan</td>
</tr>
<tr>
<td>352</td>
<td>352 CT Scan-Body Scan</td>
</tr>
<tr>
<td>359</td>
<td>359 CT Scan-Other CT Scans</td>
</tr>
<tr>
<td>400</td>
<td>Other Imaging Services-General</td>
</tr>
<tr>
<td>401</td>
<td>Other Imaging Services-Diagnostic Mammography</td>
</tr>
<tr>
<td>402</td>
<td>Other Imaging Services-Ultrasound</td>
</tr>
<tr>
<td>403</td>
<td>Other Imaging Services-Screening Mammography</td>
</tr>
<tr>
<td>404</td>
<td>Other Imaging Services-Positron Emission Tomography (PET)</td>
</tr>
<tr>
<td>610</td>
<td>Magnetic Resonance Imaging-General</td>
</tr>
<tr>
<td>611</td>
<td>Magnetic Resonance Imaging-Brain (including brainstem)</td>
</tr>
<tr>
<td>612</td>
<td>Magnetic Resonance Imaging-Spinal Cord (including spine)</td>
</tr>
<tr>
<td>619</td>
<td>Magnetic Resonance Imaging-Other MRI</td>
</tr>
<tr>
<td>921</td>
<td>Other Diagnostic Service-Peripheral Vascular Lab</td>
</tr>
<tr>
<td>255</td>
<td>Pharmacy -Drugs Incident to Radiology and Subject to the Payment Limit</td>
</tr>
<tr>
<td>360</td>
<td>Operating Room Services-General</td>
</tr>
<tr>
<td>361</td>
<td>Operating Room Services-Minor Surgery</td>
</tr>
<tr>
<td>270</td>
<td>General Supplies</td>
</tr>
<tr>
<td>371</td>
<td>Anesthesia-Anesthesia Incident to Radiology and Subject to Payment Limit</td>
</tr>
<tr>
<td>490</td>
<td>Ambulatory Surgical Care-General</td>
</tr>
<tr>
<td>621</td>
<td>Medical/Surgical-Supplies Incident to Radiology and Subject to Payment Limit</td>
</tr>
<tr>
<td>636</td>
<td>Drugs Requiring Specific Identification-Drugs Requiring Detailed Coding</td>
</tr>
<tr>
<td>921</td>
<td>Other Diagnostic Services, Peripheral Vascular Lab</td>
</tr>
</tbody>
</table>
Fiscal Intermediaries may use revenue codes with minor variations, even though Medicare rules standardize their use. Checks with your hospital's business office to determine what revenue codes are being used in your institution and why they are required.

Part V: The ICD-9-CM Coding System

The International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) is a classification system in which diseases and injuries are arranged in-groups of related cases for statistical purposes. Based on the World Health Organization's Classification of Disease, the ICD-9-CM system has been revised periodically to meet the statistical data usage. In the United States, the system has been expanded and modified to meet our country's unique clinical purposes. Clinical uses include indexing medical records, facilitating medical care reviews and completing claims for third-party payments.

The ICD-9-CM coding system is a method of translating medical terminology into codes. Codes within the system are made up of three, four or five characters. All characters are either numeric or alphanumeric. A decimal point follows all three-character codes whenever fourth and fifth characters are needed. Coding involves selecting a numeric or alphanumeric "phrase" to describe a disease or injury. For example, pneumonia may be coded as 486.

Although hospitals and other health care facilities have used ICD-9-CM codes for many years, physician offices have only been required to use ICD-9-CM codes for Medicare billing since 1990. Now, it is essential that both hospital and physician office personnel become more knowledgeable, proficient and accurate in their use of ICD-9-CM. By improving your coding skills, you can ensure appropriate payment, increased claims processing efficiency and decrease both in the number of denied claims and requests for additional information.

The Structure of ICD-9-CM

The ICD-9-CM system contains two classifications, one for diseases and the other for procedures. It consists of three volumes:

Volume 1, Diseases: Tabular Index
Volume 2, Diseases: Alphabetic Index
Volume 3, Procedures: Tabular List and Alphabetic Index

Volume 3, Procedures, is not used in the physician office. Only hospital coders for inpatient procedures use Volume 3, Procedures.


Understanding the Structure of the Tabular List

The tabular list contains codes and their narrative descriptions. It has three sections:

- Classification of Diseases and Injuries
- Supplementary Classification (V Codes and E Codes)
- Appendices

1. The Sections of the Tabular List

A. Section 1: Classification of Diseases and Injuries
There are 17 chapters in Section 1. Ten chapters are devoted to major body systems. The other seven chapters describe specific types of conditions that affect the entire body. This classification contains only numeric codes from 001.0 to 999.9.

a. How Section 1 Is Organized - The Chapter Titles and Codes
A chapter consists of a group of codes that classify diseases of a specific body system or of a specific type. The chapter titles in Section 1 describe contents of the chapter and are followed by the range of category codes included in that chapter.

Listed below are the chapters contained in Section 1:

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Category/Code Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Infectious and Parasitic Diseases</td>
<td>001-139</td>
</tr>
<tr>
<td>2.</td>
<td>Neoplasms</td>
<td>140-239</td>
</tr>
<tr>
<td>3.</td>
<td>Endocrine, Nutritional and Metabolic Diseases, and Immunity Disorders</td>
<td>240-279</td>
</tr>
<tr>
<td>4.</td>
<td>Diseases of the Blood and Blood-forming Organs</td>
<td>280-289</td>
</tr>
<tr>
<td>5.</td>
<td>Mental Disorders</td>
<td>290-319</td>
</tr>
<tr>
<td>6.</td>
<td>Diseases of Nervous System &amp; Sense Organs</td>
<td>320-389</td>
</tr>
<tr>
<td>7.</td>
<td>Diseases of the Circulatory System</td>
<td>390-459</td>
</tr>
<tr>
<td>8.</td>
<td>Diseases of the Respiratory System</td>
<td>460-519</td>
</tr>
<tr>
<td>9.</td>
<td>Diseases of Digestive System</td>
<td>520-579</td>
</tr>
<tr>
<td>10.</td>
<td>Diseases of the Genitourinary System</td>
<td>580-629</td>
</tr>
<tr>
<td>11.</td>
<td>Complications of Pregnancy, Childbirth and the Puerperium</td>
<td>630-677</td>
</tr>
<tr>
<td>12.</td>
<td>Diseases of the Skin and Subcutaneous Tissue</td>
<td>680-709</td>
</tr>
<tr>
<td>13.</td>
<td>Diseases of the Musculoskeletal System and Connective Tissue</td>
<td>710-739</td>
</tr>
<tr>
<td>14.</td>
<td>Congenital Anomalies</td>
<td>740-759</td>
</tr>
<tr>
<td>15.</td>
<td>Certain Conditions Originating in the Perinatal Period</td>
<td>760-779</td>
</tr>
<tr>
<td>16.</td>
<td>Symptoms, Signs, and Ill-Defined Conditions</td>
<td>780-799</td>
</tr>
<tr>
<td>17.</td>
<td>Injury and Poisoning</td>
<td>800-999</td>
</tr>
</tbody>
</table>

B. Section 2: Supplementary Classifications
Section 2 contains two supplementary classifications.

1. Classification of Factors Influencing Health Status and Contact with Health Services (V Codes)
This classification is made up of "V" codes, which are alphanumeric and begin with the letter "V."
V codes are used to describe circumstances, other than diseases or injuries, that are reasons for encounters with the health care delivery system or that have influences on a patient's current condition.

Example:
V16.3
Family history of malignant neoplasm, breast
V15
Other personal history presenting hazards to health
V15.0
Allergy, other than to medicinal agents

2. Classification of External Causes of Injury and Poisoning (E Codes)
This classification is made up of E codes, which are also alphanumeric and begin with the letter "E." They are used to describe circumstances and conditions that cause injury, poisoning or other adverse side effects. They are used in addition to codes in the main classification (001-999) to identify the external cause of an injury or condition.

Note: E codes may never be used alone and may never be listed as the first diagnosis.

Example:

813.21
Fracture, shaft, closed, radius (alone)
E885
Fall on same level from slipping, tripping or stumbling

C. Section 3: Appendices

There are five appendices in Section 3.

1. Appendix A: Morphology of Neoplasm
2. Appendix B: Glossary of Mental Disorders
3. Appendix C: Classification of Drugs by American Hospital Formulary Service List Number and Their ICD-9-CM Equivalents
4. Appendix D: Classification of Industrial Accidents
5. Appendix E: List of Three-Digit Categories

Understanding the Structure of the Alphabetic Index

The Alphabetic Index of ICD-9-CM, commonly referred to as the "Alpha Index" is used first when coding. It is divided into three sections:

• Alphabetic Index to Diseases and Injuries
• Table of Drugs and Chemicals
• Alphabetic Index of External Causes of Injury and Poisoning (E Codes)

Section 1: Alphabetic Index to Diseases and Injuries

Included in this section is an alphabetic list of diseases, injuries, symptoms and other reasons for contact with a hospital or a physician. Section 1 also includes three tables that classify the following diseases: human immunodeficiency virus with associated conditions, hypertension and neoplasms.

Section 2: Table of Drugs and Chemicals

This section, organized in table format, classifies the drugs and chemicals that are the external causes of poisoning and other adverse effects, specific drugs and chemical substances that the patient may have taken are listed alphabetically.

Each of these substances is assigned a code to identify poisonings, incorrect substances given, incorrect dosages taken or intoxication. Five columns, titled "External Cause" lists codes for external causes depending upon the circumstances involved in the use of the drug.

Section 3: Alphabetic Index of External Causes of Injury and Poisoning (E-Codes)

This section comprises an alphabetic list of environmental events, circumstances and other conditions that can cause injury and adverse effects.
How the Index is Organized

A diagnostic statement usually has two parts: a main term and one or more modifiers. Main terms and modifiers provide the coder with specific information about the patient's diagnosis or diagnoses, condition(s), symptom(s) or other circumstances surrounding the patient's visit to a hospital or with a physician.

Main Terms

Main terms, which describe a disease, injury, problem or complaint, are in boldface type and are listed in Sections 1 and 3 of the code book.

Examples:

Conditions -- "dizziness" "fracture" "injury"
Diseases -- "pneumonia" "arthritis" "cancer"
Nouns -- "infection" "syndrome" "disease"
Adjective -- "giant" "acute" "twisted"

Modifiers

Modifiers are words listed with a main term to provide the coder with additional information. The Alphabetic Index places modifiers in parentheses or indents them under the main term (where they are also called subterms). See figure below.

<table>
<thead>
<tr>
<th>Main Term</th>
<th>Other symptoms involving abdomen and pelvis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subterm</td>
<td>Abdominal pain</td>
</tr>
<tr>
<td></td>
<td>Colic: NOS, infantile, cramps, abdominal</td>
</tr>
<tr>
<td></td>
<td>EXCLUDES: renal colic (788.0)</td>
</tr>
<tr>
<td>Subterm</td>
<td>Unspecified site</td>
</tr>
<tr>
<td></td>
<td>Right upper quadrant</td>
</tr>
<tr>
<td></td>
<td>Left upper quadrant</td>
</tr>
<tr>
<td></td>
<td>Right lower quadrant</td>
</tr>
<tr>
<td></td>
<td>Left lower quadrant</td>
</tr>
<tr>
<td></td>
<td>Periumbilic</td>
</tr>
<tr>
<td></td>
<td>Epigastric</td>
</tr>
<tr>
<td></td>
<td>Generalized</td>
</tr>
<tr>
<td></td>
<td>Other specified site (multiple)</td>
</tr>
</tbody>
</table>

Applying ICD-9-CM for Radiology Services When Specific Diagnoses Are Not Available

1. V Codes

HCFA coding guidelines for hospitals require use of V codes when a patient is receiving only diagnostic or therapeutic ancillary services (e.g., outpatient radiology services).

For example, when a healthy patient is referred for a chest x-ray as part of a routine physical, V72.5, radiological examination, not elsewhere classified, would be the code assigned to describe the reason for the visit.
However, if the patient were ill and was referred for chest x-rays, the referring physician should have indicated the reason for requesting the chest x-ray on the referral note (eg, patient complains of cough & fever -- rule out pneumonia). In this case, if pneumonia were confirmed, the appropriate code would be:

486 Pneumonia, organism unspecified

If pneumonia had not shown up on the x-ray, however, the appropriate code would be:

786.2 Cough

2. Using Chapter 16 -- Symptoms, Signs and Ill-Defined Conditions

ICD-9-CM Chapter 16 includes symptoms, signs and abnormal results of laboratory or other investigative procedures, as well as ill-defined conditions for which there are no other, more specific diagnoses classified elsewhere. In general, codes from this chapter are used to report indicators that point with equal suspicion to two or more diagnoses or represent important problems in medical care that may affect patient management.

These codes, which occur in the 780-799 range, are also used to report:

• symptoms and signs that existed on initial encounters but proved to be transient and whose cause could not be determined

• provisional diagnoses for patients who fail to return for further investigation

• cases referred elsewhere for further investigation before being diagnosed

• and, cases in which a more definitive diagnosis was not available for other reasons

Do not use a code from 780-799 when the symptoms, signs and abnormal findings pertain to a definitive diagnosis.

Signs and symptoms codes are important since HCFA coding guidelines state that "probable, questionable, suspected or rule-out diagnoses" are not to be coded. A sign or symptom may be all that is known for certain at the time a diagnostic procedure is performed.

Coding Tip: Be sure that your ICD-9-CM coding system contains the most up-to-date information available. Changes take place each October, and your book must be current to ensure accurate coding.

Medicare Program Memorandum, Transmittal AB-01-144 (dated September 26, 2001) clarifies their coding guidelines for reporting diagnostic tests. This can be found at: [www.hcfa.gov/pubforms/transmit/AB0144.pdf](http://www.hcfa.gov/pubforms/transmit/AB0144.pdf)
Part VI: Procedural Coding System (TBC)

VI. Procedural Coding System

History


The American Medical Association published the first edition of the CPT® (Current Procedural Terminology). Originally it was a four-digit numeric coding system with narrative descriptions of services and procedures performed physicians.

2. 1970: CPT® expanded to five digits

The second edition expanded CPT® to a five-digit coding system with corresponding narratives and included two-digit modifiers.

3. 1983: HCFA developed HCPCS

In 1983, Medicare created HCPCS, the Health Care Financing Administration’s Common Procedure Coding System. Based on AMA’s copyrighted CPT®. HCPCS was the beginning of a national procedure coding system.

HCPCS is a three-level coding system required when reporting services and procedures provided to Medicare and Medicaid beneficiaries.

Three Levels of HCPCS

1. HCPCS Level I -- CPT®

- CPT® is published by the American Medical Association, updated annually, and implemented by HCFA as HCPCS Level I for reporting Medicare claims for payments of services provided to Medicare patients.

- In order to work successfully with HCPCS Level I it is necessary to have a current edition of CPT®. However, CPT alone is not sufficient.

- HCPCS Level I describes physician and hospital outpatient procedures and services.

- HCPCS Level I generally does not provide codes for drugs and supplies.

- Modifiers in CPT® are two-digit numeric codes added to the main procedure code to identify reported procedures that have been altered for specific reasons.

2. HCPCS Level II -- National Codes

- HCPCS Level II codes are published by HCFA and also updated annually. HCPCS Level II codes are also known as national codes.

- HCFA created Level II codes to supplement CPT®, which does not include codes for non-physician procedures, such as ambulance services, durable medical equipment, specific supplies, and administration of injectable drugs.

- HCPCS Level II codes consist of one alphabetic character plus four-digits.

- Examples of HCPCS Level II codes include:
  A4646 Supply of low osmolar contrast material (300-399 mgs. of iodine)
3. **HCPCS Level III -- Local codes**

- Each Medicare carrier or fiscal intermediary may create “local” codes for use within its administrative region.

- Local codes are five-digit, alphanumeric codes using the letters S, and W through Z.

- Local codes are used to denote new procedures or specific supplies for which there is no national code.

- Each local Medicare carrier may be created local codes as the need dictates.

- Medicare carriers and fiscal intermediaries are responsible for providing local codes. However, carriers are required to obtain approval from HCFA before implementing local codes.

At some point in your coding, you may find that the same procedure is coded in two or even three coding levels. Which code do you use? There are certain rules to follow if this should occur. First, if there is an overlap between a local code and either a CPT® or Level II code, use the local code—it has the highest priority.

When both a CPT® and a HCPCS Level II code have virtually identical narratives for a procedure or service, the CPT® code should be used. If, however, the narratives are not identical the Level II code should be used.

When in doubt check with your intermediary.

*NOTE:* CMS has issued instructions to prod Medicare contractors to start eliminating local codes. Transmittal AB-02-005 (1/18/2002) states that they can only continue use and maintain local codes until December 31, 2003. This is because with the implementation of HIPAA regulations necessitate this measure.

**Importance of Current Codes**

Each year changes occur within all the coding systems: ICD-9-CM, CPT® and HCPCS. Changes can be a revision to a codes narrative description, the addition of a new code or the deletion of an existing code. It is imperative that hospitals and physicians offices purchase new code books annually. It is your only mechanism to report codes accurately. (Note: outdated CPT® books should not be discarded because many third party payers don’t always use the most current versions of the CPT® code book.)

Copies of the current CPT® code book may be obtained directly from a number of publishers like the American Medical Association, St. Anthony Publishing, Inc., Medicode.

HCPCS/CPT codes are meant to describe specific procedures as normally performed and the fee schedule payment amounts are intended to cover all of the work involved in performing those procedures. Use of an inappropriate HCPCS/CPT code can have potentially serious consequences. An erroneous code can put the provider “at risk” due to overpayment. “At risk” dollars may occur as a result of coding procedures at a level higher than appropriate for the work performed (“over coding” or “up coding”). Interim payments to hospitals, based on “up coding” pose potential problems both during cost report time and in the event of a Medicare audit. Accurate coding avoids these risks.

**IMPORTANT NOTE FOR 2002:** During the printing production of CPT 2002 several errors occurred. Two of these specifically relate to radiology CPT codes (76360, 75989). Go to [www.ama-assn.org/ama/pub/article/3896-5607.html](http://www.ama-assn.org/ama/pub/article/3896-5607.html) for a complete list of corrections.
Part VII: THE CPT® CODING SYSTEM

Medicare, Medicaid and most third-party payers now require radiology to have CPT/HCPCS codes assigned for claims to be processed and paid. If CPT/HCPCS codes are omitted claims will probably be denied or delayed. Investigate claims of this status and resubmit, if necessary, with the appropriate code. Keep in mind that the existence of a CPT® or HCPCS code does not in itself guarantee that the code is acceptable to the payer or that the service is covered.

Accurate coding consists of choosing the most correct code available for the procedure or service rendered.

Structure of CPT®

The majority of the codes you will use to report radiology services come directly from the CPT® code book. To use this system properly, you need to understand some basic structure and guidelines.

The CPT® coding system has an introduction, six sections and their subsections, three appendices and an index.

1. The Introduction

The introduction explains how to use the CPT® coding system and provides definitions for the levels of service.

2. The Sections

The six main sections are:
1. Evaluation and Management Services
2. Anesthesia
3. Surgery
4. Radiology
5. Pathology and Laboratory
6. Medicine

Each section has a range of codes. (See table)

<table>
<thead>
<tr>
<th>Section</th>
<th>Range of Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation and Management</td>
<td>99201 to 99499</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>00100 to 01999 and 99100 to 99140</td>
</tr>
<tr>
<td>Surgery</td>
<td>10040 to 69979</td>
</tr>
<tr>
<td>Radiology**</td>
<td>70010 to 79999</td>
</tr>
<tr>
<td>Pathology and Laboratory</td>
<td>80002 to 89399</td>
</tr>
<tr>
<td>Medicine</td>
<td>90700 to 99199</td>
</tr>
</tbody>
</table>

** Radiology includes diagnostic radiology, ultrasound, CT, MRI, nuclear medicine, special procedures and radiation therapy.

Within the main body of CPT®, each section has a progressive structure.

Each major section is grouped into subsections.

Each subsection has groups of codes further divided into headings.

Codes may be further arranged into smaller groups under subheadings.
The final subdivision is the service or procedure code.

Example:

<table>
<thead>
<tr>
<th>Section</th>
<th>Radiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsection</td>
<td>Nuclear Medicine</td>
</tr>
<tr>
<td>Heading</td>
<td>Cardiovascular System</td>
</tr>
<tr>
<td>Subheading</td>
<td>(not generally used in radiology section)</td>
</tr>
</tbody>
</table>

**Codes**

78460 Myocardial perfusion imaging; (planar) single study, at rest or stress (exercise and/or pharmacologic), with or without quantification

78461 multiple studies, (planar) at rest and/or stress (exercise and/or pharmacologic), and redistribution and/or rest injection, with or without quantification

### 3. Category III Codes

CPT® added a new section called Category III Emerging Technology). These codes are a set of temporary codes for emerging technology, services, and procedures. Category III codes will allow data collection for these services/procedures. The use of current "unlisted codes" does not permit the opportunity for accurate collection of specific data. If a Category III code exists, this code **must** be reported instead of a Category I unlisted code. Use of these codes will help identify emerging technology, services and procedures for clinical efficacy, utilization and outcomes.

Inclusion of a Category III code does not imply or endorse efficacy, safety or the applicability to clinical practice. In fact, inclusion does not confirm to the usual requirements for CPT Category I code established by the Editorial Panel. For Category I codes, the Panel requires that the service/procedure be performed by many health care professionals in clinical practice in multiple locations and that FDA approval, as appropriate, has already been received. The nature of emerging technology, services, and procedures is such that these requirements may not be met.

Services/procedures in Category III are described as alphanumeric, with the fifth character being the alpha code. New codes in this area will be updated semi-annually via the AMA/CPT internet file in expedite dissemination for reporting. ([www.ama-assn.org/ama/pub/article/3885-3870.html](http://www.ama-assn.org/ama/pub/article/3885-3870.html))

**Examples:**

0005T Transcatheter placement of extracranial cerebrovascular artery stent (s) percutaneous; initial vessel

0006T each additional vessel (List separately in addition to code for primary procedures)

0007T Transcatheter placement of extracranial cerebrovascular artery stent (s) percutaneous, radiological supervision and interpretation, each vessel (For procedure, see 0005T, 0006T)

### 4. Appendices

There are six appendices:

- Appendix A – Modifiers
- Appendix B - Summary of Additions, Deletions, and Revisions
- Appendix C - Update to Short Descriptors
- Appendix D - Clinical Examples
- Appendix E – Summary of CPT® Add-on Codes
- Appendix F – Summary of CPT® Codes Exempt from Modifier ‘-51’

### 5. Index

The index is organized by main terms. Each main term can stand alone, or be followed by up to three modifying terms.
Not all services are included in some sections of the index. If a procedure cannot be found in the index, turn to the appropriate section and review the subsections, headings, subheadings and codes.

**General Guidelines for Using CPT®**

In order to properly code, you must understand and follow the guidelines that the AMA has provided in its manual.

It is important to recognize that the listings of a service or procedure and its code number in a specific section of the CPT® code book does not restrict its use to a specific specialty group. Any procedure or service in any section may be used to designate the services rendered by any qualified physician.

1. **Format of the Terminology**

   CPT® procedure terminology has been developed as stand-alone descriptions of medical procedures. However, some of the procedures in CPT® are not printed in their entirety but refer back to a common portion of the procedure listed in a preceding entry. This is evident when an entry is followed by one or more indentations. This is done in an effort to conserve space.

   **Example:**
   
   19100 **Biopsy of breast;** percutaneous, needle core, not using imaging guidance (separate procedure)
   
   19101 open, incisional

   Note that the common part of code 19100 (that part before the semicolon) should be considered part of code 19101. Therefore the full procedure represented by code 19101 should read:

   19101 Biopsy of breast; open, incisional

2. **Symbols**

   Three symbols are used in the CPT® code book:
   A bullet (•) before a code means the code is **new** to the CPT® book for that particular edition.

   **Example:**
   
   • 76394 Magnetic resonance guidance for, and monitoring of tissue ablation
      - (For percutaneous radiofrequency ablation, use 47382) -

   A triangle (▲) means the description for the code has been **changed** or **modified** since the previous revision of the CPT® book.

   **Examples:**

   ▲ 76370 Computerized axial tomographic guidance for placement of radiation therapy fields

   The star (*) is used to identify certain surgical procedures. When a star (*) follows a surgical procedure code number, the service as listed includes the surgical procedure only. Associated pre- and postoperative services are not included in the services listed. Also, it is generally acceptable to bill supply code A4550 (surgical tray) when these procedures are performed in a physician's office. See the Surgery Guidelines for the complete rules.
Examples:

62770* Spinal puncture, lumbar, diagnostic
32000* Thoracentesis, puncture of pleural cavity for aspiration, initial or subsequent

The 1999 edition added some new symbols to be aware of. CPT® add-on codes are annotated by a "+" symbol and the "Ø" symbol is used to identify codes that are exempt from the use of modifier –51 but have not been designated as CPT® add-on procedures/services. Appendix E of your CPT® book is a complete summary of add-on CPT® codes.

Examples:

+ 36218 Selective catheter placement, arterial system; additional second order, third order, and beyond, thoracic or brachioccephalic branch, within a vascular family
(List in addition to code for initial second or third order vessel as appropriate)
(Use 36218 in conjunction with codes 36216, 36217)-

Ø 36488* Placement of central venous catheter (subclavian, jugular, or other vein) (eg, for central venous pressure, hyperalimentation, hemodialysis, or chemotherapy); percutaneous, age 2 or under

"And/or" versus "or" descriptor terminology - If the descriptor says "and/or" it means there are multiple terms that could apply and you could do all of them or one of them, but it's a single code assignment. By comparison, you separately report each procedure in those descriptors with the "or" language. For example, code 64470 (cervical or thoracic injection) you'd code 64470 twice if you injected both one cervical level and one thoracic level. A modifier (-59) will probably be necessary.

3. **Modifiers - Special Guidelines for Using Modifiers with Reporting**

**Hospital Outpatient Services**

Modifiers are used to communicate additional information regarding a specific CPT® code. They are two-digit numeric, alpha or alphanumerical in nature. Physicians have used modifiers for many years. The use of modifiers is an integral part of the Outpatient Hospital Perspective Payment System (PPS) payment implementation. Encourage providers to begin using modifiers now, so that any problems encountered may be adjusted prior to April 1, 2000.

- Do not report a radiology procedure that was canceled.
- Modifier -50 is used to report bilateral procedures that are performed at the same session. Report the appropriate HCPCS code and add the modifier –50 to the procedure code to identify that the procedure was performed on a contralateral side. Units should be reported as one.
- When modifier -50 is reported, reimbursement is for two procedures. Radiology is reimbursed at 200%.
- When a radiology procedure is reduced, the correct reporting is to code to the extent of the procedure performed. If no code exists for what has been done, report the intended code with modifier -52 appended.
- At this time we are not reducing payment for radiology services reported with modifier -52 (reduced services). Payment will still be the least of the reasonable cost, customary charge, or blended amount.

**HCPCS Level II Modifiers**

- Generally, these codes are required to add specificity to the reporting of procedures performed on eyelids, fingers, toes, and arteries.
- The may be appended to CPT® codes.
- If more than one level II modifier applies, repeat the HCPCS code on another line with the appropriate level II modifier. Example: Code 26010 (drainage of finger abscess; simple) done on the left hand thumb and second finger would be coded:
  26010FA
  26010F1
- The Level II modifiers apply whether Medicare is the primary or secondary payer. These instructions are effective 4/1/2000. These instructions should be implemented 4/1/2000. See Chapter II of the Medicare Outpatient Prospective Payment System training session for further details.

Revised January 30, 2002
4. Unlisted Procedures
Not all radiology services or procedures are assigned a CPT® code. The manual does not contain codes for infrequently used, new or experimental procedures. The radiology section contains codes that have been set-up specifically for describing unlisted procedures. Unlisted procedure codes almost always reject on the UB-92 or HCFA-1500.

Example:

76499 Unlisted diagnostic radiologic procedure
76999 Unlisted diagnostic ultrasound procedure

Part VIII: APPLYING CODING FUNDAMENTALS TO RADIOLOGY

The previous sections provided instructions and general information necessary to understand the basics of coding. This sections builds on those basics and offers coding tips for each area of radiology.

The fourth section of CPT® (the radiology section) contains the codes that describe the imaging portion of radiology procedures including special procedures, computed tomography, magnetic resonance imaging, ultrasonography, nuclear medicine and radiation oncology. The four subsections are organized as follows:

- Diagnostic radiology (including specials, computed tomography and magnetic resonance imaging)
- Diagnostic ultrasound
- Radiation oncology
- Nuclear medicine

The Omnibus Budget Reconciliation Act (OBRA) of 1986 requires hospitals to report claims for outpatient services using HCPCS coding. CPT® codes are used by physicians to report physician services, and do not necessarily reflect the technical component of a service furnished by the hospital. Therefore, ignore any wording in the CPT® code that indicates a physician must perform the service.

For hospitals, all CPT/HCPCS codes must be accompanied by compatible UB-92 revenue codes. Supplies and drugs incident to radiology are properly reportable only with revenue codes.

Periodically review CPT/HCPCS codes and related procedure charges against the Medicare radiology fee schedule to assure that they are in line with the current codes and fee schedule payment limits. Review of the fee schedule also provides a comparison of reasonable proportionality of charges, in that the fee schedule is derived from established radiology relative value units (RVUs).
General Principles

a. Procedures with Fewer than Specified Minimum Views
Procedure narratives often specify the number of views. When an exam does not meet the stated criterion, it may have to be reported with an unlisted procedure code. However, use of unlisted procedure codes will delay payments or result in payment denials. Consider revising any procedures performed with less than the specified number of views to include the minimum. Inform physicians who order fewer than specified minimum views that hospitals may not be paid unless the views performed conform to Medicare's requirements. Consider the potential liability issues associated with appropriate procedures. In any event, require documentation of medical necessity.

b. Bilateral Procedures
Procedure descriptions often are specific about whether unilateral and/or bilateral views are included. When bilateral procedures are performed, and not specified in the procedure narrative as "unilateral" and/or "bilateral", report the procedure using the correct CPT® code plus modifier -50. Document the medical necessity through appropriate use of ICD-9-CM diagnosis codes. Bilateral views performed only for comparison purposes typically are coded as single procedure.

c. Non-Reportable Codes -- Physician versus Hospital
With the exception of the "surgical portion" of interventional coding, radiology procedures without technical components are not reportable to Medicare by hospitals. Similarly, procedures without professional components are not reportable to Medicare by physicians.

Other codes are prohibited because they represent services already included in fee limits set for other procedures.

Whenever a hospital submits an UB-92 to Medicare, the claim is reviewed by a system known as the Outpatient Code Editor (OCE). OCE includes an edit that prevents non-reportable codes from being charged. If a non-reportable code appears on the UB-92, the entire claim is automatically rejected.

d. Unlisted procedures
Physicians may bill exceptional radiology services that do not have specific CPT® codes using unlisted 7XX99 codes but only under defined conditions. These should include only services that are rarely provided, unusual or new. When using unlisted procedure codes, providers are required to send their Medicare carrier a description of the nature, extent and need for the procedure, including the time, effort and equipment necessary. These codes typically will not be accepted as substitutes for locating and using appropriate existing codes. If the procedure is not identified correctly, the carrier will determine the correct code to be assigned to the procedure. Other third-party payer practices vary.

Use of unlisted procedure codes by hospitals for radiology services will delay payments or result in payment denials. Fiscal intermediaries simply will not pay hospitals under any circumstances for outpatient radiology procedures reported with "99" codes.

e. Procedures versus Resources
Medicare generally will not make payments to hospitals for use of additional resources related to any defined radiology procedure (eg for such things as monitoring, use of portable equipment, additional views, additional sequences, extra film, room time, etc.). Medicare has considered average costs for these resources in establishing the radiology fee schedule payment limitations.

Under no circumstances is it appropriate to use "unlisted procedure" codes in attempting to bill for technologists callbacks, STAT procedures, or other resource costs associated with treating Medicare patients. Setting increased fees where additional resources are required may capture these costs.

f. Interventional Procedures
Interventional procedures must be assigned CPT® codes that describe the imaging component (the supervision and interpretation) of the procedure along with at least one additional code(s) that describe catheter insertions and/or injection procedures performed. Interventional coding requirements will be discussed in more detail in a subsequent section of this manual.

g. Aborted Procedure
Refer to the section on modifiers (-53, -52, -73, -74) for complete details.

h. Combined Procedures
There are no separate codes covering certain combined procedures, eg, a hand and forearm included in a single x-ray. The Medicare Hospital Manual states, "use the code with the higher fee schedule amount."

i. Portable Equipment (C-Arm, Swing Arm, etc.)
When procedures are performed using portable equipment, bill using the appropriate code for the procedure. Additional charges for the use of portable equipment should not be submitted.

j. "On Call" Charges
On-Call charges are not billed separately. The appropriate code for the performed procedure must be reported. Costs related to on call personnel may be included on the cost report and may be spread across individual charges related to the personnel.

Head and Neck

a. Limited versus Complete Procedures
Mandible, mastoids, facial bones, sinuses and skull series are listed as complete procedures and also with limited views. Select the code that most accurately represents the work performed.

b. Speech Study for Speech Pathology
HCPCS code 70371 describes complex dynamic pharyngeal and speech evaluation typically performed in conjunction with services provided by a speech therapist. Even though this is a radiology procedure, it is often misunderstood to be the code to describe speech therapy services. Coordinate with speech therapy personnel to avoid double billing.

Chest

a. Bronchography - Unilateral and Bilateral
Bronchography procedures (71040, 71060) must be coded with codes that describe the imaging components (radiological supervision and interpretation) of the procedure along with an additional code or codes that describe the contrast material injected or instillation, etc. (31656, 31708, 31710, 31715).

b. Ribs
Procedure codes 71100, 71101, 71110 and 71111 indicate whether the procedure is performed with or without PA chest, unilateral versus bilateral. Do not bill additionally for a single-view chest.

Spine and Pelvis

a. Select Codes with Care
Each code defines a specific minimum number of views.

b. Single View Spines
HCPCS code 72020 is appropriate for describing cross-table lateral of the cervical spine, including
those performed with the portable unit in the emergency room. Use this code in addition with any other subsequent work performed.

c. Sacrum and Coccyx
This procedure includes both anatomic parts (sacrum & coccyx) with the single HCPCS code 72220.

d. Myelography and Diskography
Myelography (72240, 72255, 72265, 72270) and diskography (72285, 72295) procedures must be assigned codes that describe the imaging component (radiological supervision and interpretation) along with an additional code that describes the injection procedure performed (61055, 62284, 62291, 62290).

Upper and Lower Extremities

a. Bilateral Procedures Billed Separately, When Medically Necessary
Support the medical necessity of performing bilateral procedures with relevant diagnosis codes to prevent third-party confusion as to whether or not the bilateral views were only for comparative purposes. Select codes with care, taking note of those that specify whether the procedures are defined as unilateral or bilateral. When not otherwise specified, bill medically necessary bilateral extremity procedures separately, when performed separately.

b. Combination Procedures
When the medical necessity of combination procedures can be documented (eg, hand and wrist when trauma is apparent in both) bill separately when separate imaging is performed for each area.

c. Two Views versus Three Views
"We never do only two views" is an assertion that often collapses when questions are asked about post-reduction and post-cast procedures, where views are often AP and lateral only for position or alignment. Be sure to include two-view and three-view wrist, hand, ankle and foot CPT/HCPCS codes in your chargemaster.

d. Knees -- Select CPT® Codes with Care
These codes were modified in 1999 to eliminate the previous phrasing problems. The new wording states: 73560 one or two views; 73562 three views; and 73564 complete, four or more views.

e. Arthrography
Arthrography procedures (73085, 73115, 73525, 73542, 73580, 73615) must be assigned codes that describe the imaging component (radiological supervision and interpretation) along with an additional code that describes the injection procedure performed (24220, 25246, 27093, 27095, 27096, 27370, 27648).
CPT 2002® added a cross-reference to this series of CPT® codes clarifying that the use of 76003 (fluro guidance for needle placement) should not be reported with these codes.

Abdomen

a. Flat and Upright and/or Decubitus versus Flat Plate and Additional Oblique and Cone Views
Select the CPT/HCPCS code that best describes the abdomen procedure being performed. Note availability of codes for single AP of the abdomen (74000), AP and additional oblique (74010), complete abdomen without an upright chest (74020), and complete abdomen with a PA chest (74022).
b. Kidney, Ureter and Bladder versus Abdominal "Flat Plate"
KUBs and flat plates differ only in the position of the film relative to the anatomy. The CPT/HCPCS code is the same (74000).

**Gastrointestinal Tract**

a. GI Series with Barium versus Air Contrast, with or without Glucagon
Routine Upper GI procedures have specific set of codes:

- 74240 describes Upper GI performed without or with delayed films and without a KUB
- 74241 describes Upper GI performed without or with delayed films including a KUB (do not bill additionally for the KUB)
- 74245 describes Upper GI including small bowel follow-through including multiple serial films

When routine Upper GI procedures are enhanced with air contrast, high-density barium, an effervescent agent and whether performed without or with glucagon, the following codes should be used instead of those above:

- 74246 describes Upper GI performed with air contrast, with specific high density barium, with an effervescent agent, and without or with glucagon, without or with delayed films, without KUB
- 74247 describes Upper GI performed with air contrast, with specific high density barium, effervescent agent, without or with glucagon, without or with delayed films, with KUB
- 74249 describes Upper GI performed with air contrast, specific high density barium, effervescent agent, and without or with glucagon, including small bowel follow-through

According to CCI edits, upper GI studies include an esophagram, since routine evaluation of the esophagus is inherent in this procedure. Also, the ACR has an article on this topic ACR Bulletin, August 1996.

Glucagon is used to reduce peristalsis, improving visualization during gastrointestinal imaging. Medicare makes no extra payment allowance for glucagon.

b. Small Bowel and Colon
HCPCS code 74250 specifically describes small bowel procedures, including multiple serial films, when performed alone (not as a part of an Upper GI).

HCPCS code 74240 describes routine barium enema procedures. When this procedure is performed with air contrast and specific high-density barium, 74280 is the appropriate HCPCS code.

c. Operative Cholangiography and Biliary Duct Stone Removal Codes
Operative cholangiography (74305, 74320) and biliary duct stone removal procedures (74327) must be assigned codes that describe the imaging component (radiological supervision and interpretation) along with additional code(s) that describe the injection procedure: 47505, 48400, 47560-47561, 47563 for the operative cholangiography and 47630 for biliary duct stone removal performed.

d. Three ERCP Codes
HCPCS codes 74328, 74329 and 74330 distinguish between the imaging components (radiological supervision and interpretation) of biliary, pancreatic, and combined biliary and pancreatic catheterizations. Surgical codes are required to report the actual catheterization (see 43260-43272

*Revised January 30, 2002*
as appropriate).

**Urinary Tract**

a. Tomography Included with Two IVP Codes
HCPCS code 74400 describes IVPs performed intravenously, without or with KUB, and without or with tomography. Do not charge additionally for the KUB or the tomography.

HCPCS code 74415 describes IVPs performed by infusion, drip technique and/or bolus technique including nephrotomography.

There is no difference in 74400 and 74415 except for the fact that the technical component of 74415 is slightly higher. All IVPs are done with bolus injection.

Delayed films, when required for these studies, are considered an integral part of the evaluation and are not coded and billed separately.

b. Urographic and Cystographic Procedures
Urographic and cystographic procedures must be assigned codes that describe the imaging component (radiological supervision and interpretation) along with an additional code(s) that describe the catheter insertion and/or injection procedure.

c. Gynecological and Obstetrical
Hysterosalpingography (74740) and transcervical catheterization of the fallopian tube (74742) are both interventional procedures which must be assigned codes that describe the imaging component (radiological supervision and interpretation) along with an additional code that describe the catheter insertion and/or injection procedure (58340, 58345).

**Miscellaneous Procedures**

a. Fluoroscopy
CPT/HCPCS code 76000 indicates “fluoroscopy up to one hour” and should be reported one time only per patient encounter to describe fluoroscopy activity for any increment of time up to one hour. CPT/HCPCS code 76001 is used for exams utilizing “fluoroscopy over one hour.”

Coverage for fluoroscopy support services may be questionable when a referring physician does not order the work, when there is no documentation of medical necessity, or when there is no physician interpretation of the output.

**MAMMOGRAPHY**

b. Mammography -- Screening versus Diagnostic
Effective April 1, 1995, all mammography facilities (both diagnostic and screening) require a certification number. The following rules apply to Medicare beneficiaries!

**Diagnostic Mammograms** – Code 76090 is to be used for reporting “mammography, unilateral.” Code 76091 is to be used for reporting “mammography, bilateral.”

Diagnostic mammograms is indicated in the presence of symptoms or signs of breast disease, such as nipple discharge or bleeding, presence of a mass, skin changes, tenderness, or other abnormalities that may suggest the presence of breast disease. As define in Section 410.34 of the Code of Federal Regulation (CFR), diagnostic mammograms are radiologic procedures furnished to a man or woman with:
1. Signs or symptoms of breast disease, or  
2. A personal history of breast disease, or  
3. A personal history of biopsy-proven benign breast disease, and  
4. Include a physician's interpretation of the results.

They must be ordered by a physician or qualified non-physician practitioner and are covered as often as is medically necessary. A specific diagnosis is required. A "rule out" diagnosis is insufficient medical necessity documentation.

**Screening Mammograms** -- Code 76092 is to be used for reporting "screening mammography, bilateral (two view film study of each breast)."

The term screening mammography means a radiographic procedure provided to an asymptomatic woman for the purpose of early detection of breast cancer. The examination includes a physician's interpretation of the results of the procedure. Unlike diagnostic mammography, there do not need to be signs, symptoms, or history of breast disease in order for the exam to be covered. There is no requirement that the screening mammography be prescribed by a physician for an eligible beneficiary to be covered. Payment may be made for a screening mammography furnished to a woman at her direct request.

Beginning January 1, 1998, Medicare provides Part B coverage of screening mammography for women. Effective January 1, 1998, section 4101 of the Balanced Budget Act (BBA) of 1997 provides for one baseline screening mammogram for women 35 through 39 years of age. The Part B deductible is waived. For women age 39 and over, payment may be made for an annual screening mammogram if at least 11 months have passed following the month in which the last screening was performed.

ICD-9 codes that support medical necessity for either diagnostic or screening mammography can be found on CMS's LMRP website at [www.lmrp.net](http://www.lmrp.net).

Limitation of liability provisions pertain to items and services denied as "not reasonable and necessary" for the diagnosis and treatment of illness or injury or to improve the functioning of a malformed body member. Screening mammograms denied as being performed more frequently than allowed under Medicare law, or because they were not performed at a Medicare-approved screening center, fall under limitation and liability regulations as well. Providers should notify their Medicare patients in writing, prior to performing screening mammograms that Medicare might deny the service and that the beneficiary, being so informed, agrees, in writing, to pay for the screening. Providers who do not provide such advance notice may be held liable for the charges should Medicare subsequently deny the service as not reasonable and necessary. Modifier GA should be reported on the service line following the procedures code to indicate that the provider has on file a signed statement of waiver from the beneficiary.

**Special Billing Instructions When Radiologist Interpretation Results in Additional Films**  
For dates of service on or after January 1, 2002, new billing instructions apply. Medicare allows additional films to be done without an additional order from the treating physician. Instruct providers that when submitting a claim for a screening mammogram and a diagnostic mammogram for the same patient on the same day, attach modifier GG to the diagnostic mammogram. We are requiring modifier GG to the diagnostic mammogram for tracking and data collection purposes. Medicare will reimburse both the screening mammography and the diagnostic mammography.

According to the Federal Register, dated October 21, 1997, page 59057, under *Ordering of Diagnostic Tests*, "We are adding an additional exception to £410.32 to indicate that a physician who meets the qualification requirements for an interpreting physician under section 354 of the Public Health Service Act as provided in £410.34 (Mammography services: Conditions for an limitations on coverage), paragraph (a)(7), may order a diagnostic mammogram based on the..."
findings of a screening mammogram even though the physician does not treat the beneficiary. We believe this is appropriate because the Food and Drug Administration rather than HCFA is responsible for the conditions under which mammograms are covered. It would also facilitate additional and necessary diagnostic testing to investigate suspicious findings at the time the beneficiary is present at the testing site rather than at a later date for follow-up testing.”

c. Computer-Aided Detection (CAD) for Mammography
A new CPT® book was included in 2002 to report digitization of mammographic films or computer-aided detection (CAD) used in conjunction with screening mammography (76085).

76085 Digitization of film radiographic images with computer analysis for lesion detection and further physician review for interpretation, screening mammography (List separately in addition to code for primary procedure) (Use 76085 in conjunction with code 76092)

For diagnostic mammography using CAD a new HCPCS code was added as well, G2036.

d. Mammography Performed with New Technologies
Section 104 of the Benefits Improvement and Protection Act 2000, entitled Modernization of Screening Mammography Benefit, provides for new payment methodologies for both diagnostic and screening mammography. (Program Memorandum, Transmittal AB-01-20, dated February 1, 2001). Under this provision, payment for technologies that directly take digital images will be provided as well as establishing new HCPCS codes to identify these procedures.

e. Mammographic Guidance for Needle Placement
This interventional procedure must be coded with CPT/HCPCS code 76096 describing the imaging component (radiological supervision and interpretation) along with an additional code or codes to describe the placement of the needle placement (10022, 19000, 19102, 19103, 19290, 19291).

f. Stereotactic Localization for Breast Biopsy
This interventional procedure must be coded with CPT/HCPCS code 76095 describing the imaging component (radiological supervision and interpretation) along with an additional code to describe the biopsy (10022, 19000, 19101, 19102, 19103, 19290, 19291). Report these codes for each lesion.

For an imaging guided biopsy of non-palpable masses of the breast (stereotactic or ultrasound) use 19102 or 19103 and the appropriate guidance code (76095, 76360, 76363, or 76942) for each lesion biopsied, not each sample. New (2001) CPT® code “19102 is intended to report image-guided percutaneous needle core biopsy. CPT® code 19103 was added to report percutaneous image guided biopsy of the breast utilizing an automated vacuum assisted or rotating biopsy device.” Code 19295 for the placement of a metallic localization clip during breast biopsy.

g. Radiological Exam, Surgical Specimen
Verify that charges are being made for radiological examinations of breast surgical specimen (76098) whenever nodule localizations are performed and specimens are examined radiographically.

h. Tomography - Linear versus Complex Motion (Except IVP)
Code accurately to the equipment used. HCPCS code 76100 is for linear tomography. CPT/HCPCS code 76101 and 76102 are for complex motion/hypercyclodial work (unilateral and bilateral, respectively).

i. Consultation on X-ray Exam Performed Elsewhere
Even though hospital resources may be used, code 76140 is not reportable by hospitals. This code is reportable by physicians only and even this acceptability may be limited. Third-party payers increasingly are requiring codes for the procedure interpreted.

**Low Osmolar (Nonionic) Contrast Material**

Medicare Intermediary Manual Part 3-Claims Process, Transmittal No. 1612, dated January 1994, Section 3631 added a new subsection that describes payment for low osmolar contrast material for Hospital Outpatient Radiology and Other Diagnostic Procedures. A clarification (revision) was issued with HCFA Pub. 10, Rev. 718, 07/97, Section 443. Basically the revision includes additional ICD-9-CM diagnosis codes, a specific revenue code for reporting, and instructions that claims for LOCM will be denied when the medical conditions for payment are not met.

Low Osmolar Contrast Material (LOCM) is paid on a reasonable cost basis (in addition to payment for the radiology procedure) when it is used in the following situations:

- **In all intrathecal injections.** The applicable HCPCS codes for such injections are: 70010 70015 72240 72255 72265 72270 72285 72295; or

In intravenous or intra-arterial injections when certain medical conditions are present in outpatients. You must verify the existence of at least one of the following medical conditions, and report the applicable ICD-9-CM code(s) in item 67 (principal diagnosis code) or items 68-75 (other diagnosis codes) of the UB-92.

- **A history of previous adverse reaction to contrast material.** The applicable ICD-9-CM codes are V14.8 or V14.9. The conditions that should not be considered adverse reactions are a sensation of heat, flushing, or a single episode of nausea or vomiting. If the adverse reaction occurs on that visit with the induction of contrast material, codes describing hives, urticaria, etc. should also be present, as well as a code describing the external cause of injury and poisoning, E947.8;

- **A history or condition of asthma or allergy**, indicated by ICD-9-CM codes V07.1, V14.0 through V14.9, V15.0, 493.00, 493.01, 493.10, 493.11, 493.20, 493.21, 493.90, 493.91, 495.0, 495.1, 495.2, 495.3, 495.4, 495.5, 495.6, 495.7, 495.8, 495.9, 995.0, 995.1, 995.2 and 995.3;
• **Significant cardiac dysfunction** including recent or imminent cardiac decompensation, severe arrhythmia, unstable angina pectoris, recent myocardial infarction, and pulmonary hypertension. The applicable ICD-9-CM codes are:

402.00 404.00 410.00 410.50 411.1  427.0  428.0  785.50  
402.01 404.01 410.01 410.51 415.0  427.1  428.1  785.51  
402.10 404.02 410.02 410.52 416.0  427.2  428.9  785.59  
402.11 404.03 410.10 410.60 416.1  427.31 429.0  
402.90 404.10 410.11 410.61 416.8  427.32 429.1  
402.91 404.11 410.12 410.62 416.9  427.41 429.2  
  404.12 410.20 410.70 420.0  427.42 429.3  
  404.13 410.21 410.71 420.90 427.5  429.4  
  404.90 410.22 410.72 420.91 427.60 429.5  
  404.91 410.30 410.80 420.99 427.61 429.6  
  404.92 410.31 410.81 424.90 427.69 429.71  
  404.93 410.32 410.82 424.91 427.81 429.79  
   410.40 410.90 424.99 427.89 429.81  
   410.41 410.91 427.90 429.82  
   410.42 410.92 429.89  
   429.90

• **Generalized severe debilitation** indicated by ICD-9-CM codes are 203.00, 203.01, all codes for diabetes mellitus, 518.81, 585, 586, 799.3, 799.4 and V46.1; or

• **Sickle cell disease** indicated by ICD-9-CM codes 282.4, 282.60, 282.61, 282.62, 282.63 and 282.69.

See Appendix B for a complete summary of the CPT® and/or ICD-9-CM codes identified in this regulation.

HCPCS codes are required when billing for LOCM. If one of the above conditions for payment is met, use one of the following HCPCS codes as appropriate:

A4644 Supply of low osmolar contrast material (100-199 mgs. of iodine) [Isovue®-128]
A4645 Supply of low osmolar contrast material (200-299 mgs. of iodine) [Isovue®, Isovue-M®-200]
A4646 Supply of low osmolar contrast material (300-399 mgs. of iodine) [Isovue-300®, Isovue-M®-300]

When billing for LOCM, use revenue code 636.

Note: LOCM is never billed with revenue code 255 or as part of the radiology procedure.

Your Medicare intermediary will edit for the intrathecal procedure codes and the above ICD-9-CM codes to determine if payment for LOCM is to be made. If an intrathecal procedure code is not present, or one of the ICD-9 codes is not present to indicate that a required medical condition is met, your intermediary will deny payment for LOCM. In these instances, LOCM is not covered and should not be billed to Medicare. *With the implementation of APCs these HCPCS codes are in an "N" status which means they are "incidental services, packaged into APC rates (no additional payment allowed)." The recommendation is to still bill these codes appropriately since they should stay on the cost report for consideration in transitional payments.*

For **Part B providers** (free standing imaging centers) the billing requirements for LOCM are similar but generally do not allow for as many covered diagnosis codes. Check with your local Medicare carrier for covered ICD-9. When the patient's condition does not meet the "characteristics" for separate payment for the low osmolar contrast media, the LOCM will be considered included or "bundled" into the technical component of the procedure. The physician may not bill the beneficiary for the charges for the LOCM even with the patient's consent, since this will not necessitate a
Bone Mineral Density Studies or DEXA

This standardized coverage is effective for claims dated on or after July 1, 1998. Bone mass measurement is a radiographic or radioisotopic procedure: (1) performed with a bone densitometer (other than dual photon absorptiometry) or a bone sonometer (i.e., ultrasound) device that has been approved or cleared for marketing by the FDA; (2) performed on a qualified individual for the purpose of identifying bone mass or detecting bone loss or determining bone quality; and (3) includes a physician's interpretation of the results of the procedure. To qualify for Medicare coverage of a bone mass measurement study, a beneficiary must be one of the following:

- An estrogen-deficient woman at clinical risk for osteoporosis,
- An individual with vertebral abnormalities as demonstrated by an x-ray to be indicative of osteoporosis, osteopenia (low bone mass) or vertebral fracture
- An individual receiving (or expecting to receive) glucocorticoid (steroid) therapy equivalent to 7.5 mg of prednisone, or greater, per day, for more than 3 months,
- An individual with primary hyperparathyroidism,
- An individual being monitored to assess the response to or efficacy of a FDA-approved osteoporosis drug therapy.

HCFA also created four new HCPCS "G" codes to define studies that are not described under CPT®. CPT® codes covered under HCFA's policy for bone mass measurement:

- 76075 Dual energy x-ray absorptiometry (DEXA), bone density study, one or more sites; axial skeleton (e.g., hips, pelvis, spine)
- 76076 Dual energy x-ray absorptiometry (DEXA), bone density study, one or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)
- 76078 Radiographic absorptiometry (photodensitometry), one or more sites
- 78350 Bone density (bone mineral content) study, one or more sites; single photon absorptiometry
- G0130 Single energy x-ray (SEXA) absorptiometry bone density study, one or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist and heel)
- G0131 CT bone mineral density study, one or more sites; axial skeleton (e.g., hips, pelvis, and spine),
- G0132 CT bone mineral density study, one or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist and heel)

HCFA's general standard on frequency of coverage for Medicare patients is that they may receive a bone mass measurement study if at least 23 months have passed since the last measurement was performed. However, there are exceptions in which Medicare patients may be covered more frequently.

These include, but are not limited to:

- Monitoring beneficiaries who have been on long-term glucocorticoid (steroid) therapy for more than three months and
- Allowing for a confirmatory baseline bone mass measurement (either central or peripheral) to permit monitoring of beneficiaries in the future if the initial test used a technique different from the proposed monitoring method.

Medical record documentation maintained by the treating physician must clearly indicate the medical necessity for the ordering of their services. The following ICD-9 codes support medical necessity denial. The denial is not based on the medical necessity, there is simply a choice between payment methods.
necessity for central bone density studies, but double check your local coverage policy – 244.0-244.9, 252.0, 256.2, 256.3, 733.00-733.02, 733.09, 733.11-733.16, 805.2, 806.4, 808.0-808.9, E932.0, E932.7, E934.2, E936.1. Specific ICD-9 codes that support medical necessity for DEXA can be found on HCFA's LMRP website at: [www.lmrp.net](http://www.lmrp.net).


History
Prior to 1992, CPT guidelines required the use of only one CPT code from the radiology section to identify the injection, catheter movement, and interpretation performed by a physician. This coding scheme was known as "complete procedure."

In 1992, all of the "complete procedure" codes were deleted and new guidelines and CPT codes introduced to handle the coding of interventional procedures. The new coding system is known as "component coding". It requires at least two CPT codes, one to identify the surgical or procedural aspect (such as needle positioning, catheter placement, or stent deployment) and one to identify the radiological/imaging guidance and interpretation portion. This change brought new challenges to accurately billing for these types of procedures:

• thorough comprehension of the human anatomy and vasculature;
• clear picture of the procedure(s) performed by the physician(s);
• understanding of the terminology; and
• knowledge of the component coding rules.

Effective coding and billing is necessary for physicians and hospitals to get paid for their work. However, Medicare and other third party payers frequently change the rules by which physicians are reimbursed, often making this a frustrating process. In addition, the rapid development of new technologies and the increased complexity of interventional procedures can make this process a laborious one.

Each practice will need to develop a coding and billing system that works for that organization.

Physicians should be actively involved, and the use of a coding sheet helps to facilitate your day-to-day procedural coding. Most facilities find a single physician/hospital charge sheet benefits both and improves compliance in submitting identical correct codes.

Meticulous documentation is key for complete, correct coding and optimal reimbursement. From the payer's perspective, if it's not documented, it's not done! A standardized 5-step approach to documenting interventional procedures will help assure accurate coding, assist in revealing the level of complexity, and support the medical necessity of the procedure(s).

These steps are:

• **Document all of the catheter access points (puncture sites).** If multiple access points are used, a code for each is appropriate with use of catheter selectivity coding rules.

• **Document all catheter end points.** Describe the exact anatomic location where the catheter was ultimately placed to perform a procedure and/or to visualize, read and interpret vessels.

• **Describe all vessels catheterized within each vascular family separately.**

• **Document all vessels visualized during the procedure.**

• **Describe any abnormal vascular anatomy.** Anomalies in vascular structure may effect the vascular ordering when vessels are selected.

The rest of this section describes the component coding of various interventional procedures.
Biopsies, Cyst Aspirations, Arthrography & Simple Interventional Procedures

For certain basic procedures, the component coding method is very obvious. The radiology supervision and interpretation (S&I) code is specifically paired with a surgical code.

**Arthrography** is described quite simply. S&I and procedure codes have a 1:1 correlation. If there are multiple injections for the wrist or TMJ, use only a single S&I code, but charge for each injection.

Examples:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrist Arthrogram</td>
<td>25246 x 3, 73115</td>
</tr>
<tr>
<td>Knee Arthrogram</td>
<td>27370, 73580</td>
</tr>
</tbody>
</table>

Myelograms typically have a 1:2 correlation. A choice between two CPT injection procedures must be made. 62284 describes the injection procedure for a myelogram, other than C-1/C-2, while 61055 describes cisternal or lateral cervical (C1-C2) puncture.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumbar Myelogram</td>
<td>62284, 72265</td>
</tr>
</tbody>
</table>

Biopsies and aspirations are coded by procedural codes from the appropriate anatomic section of the CPT manual in conjunction with either:

- 76003 Fluoroscopic guidance for needle placement (eg, biopsy, aspiration, injection, localized device)
- 76360 CT guidance for needle placement (eg, biopsy, aspiration, injection, localized device)
- 76932 Ultrasound guidance for endomyocardial biopsy
- 76942 Ultrasound guidance for needle placement (eg, biopsy, aspiration, injection, localized device)

For example,

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renal biopsy by fluoro</td>
<td>50200, 76003</td>
</tr>
</tbody>
</table>

An ultrasound guided renal biopsy is coded 50200 and 76942; while a CT guided renal biopsy is coded 50200 and 76360.
Angiography

The coding of angiography procedures is very complex. There are different rules governing the “S&I” codes and surgical codes. The two components should be assigned separately as described below.

* Radiological Supervision & Interpretation (S&I) codes can be billed to describe every separate vessel imaged during a procedure.

* Surgical Codes can be billed for each vascular family, the highest order branch within each family, and additional vessels studied. Each of those terms will be defined and examples of various procedures provided.

There are five vascular systems:
- Arterial system
- Venous system
- Pulmonary system
- Portal system
- Lymphatic system

Services in each system should be separately described.

All vascular catheterizations are described as either non-selective or selective.

*Non-selective catheter placement* means the catheter or needle is placed directly into an artery (and not moved or manipulated further) or is negotiated only into the aorta (thoracic and/or abdominal) from any approach.

Non-selective arterial codes include:

- 36160 Introduction of needle/catheter, aortic, translumbar
- 36200 Introduction of catheter, aorta
- 36100 Introduction of needle or intracatheter; carotid or vertebral artery
- 36120 retrograde brachial artery
- 36140 extremity artery
- 36145 arteriovenous shunt created for dialysis

Examples of non-selective catheter placement:

<table>
<thead>
<tr>
<th>Arch for Great Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td>36200 Introduction of catheter, aorta</td>
</tr>
<tr>
<td>75650 Angiography, cervicocerebral, catheter, including vessel of origin, (S&amp;I)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abdominal Aortogram</th>
</tr>
</thead>
<tbody>
<tr>
<td>36200 Introduction of catheter, aorta</td>
</tr>
<tr>
<td>75625 Aortography, abdominal, by serialography, (S&amp;I)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aortogram with Runoff</th>
</tr>
</thead>
<tbody>
<tr>
<td>36200 Introduction of catheter, aorta</td>
</tr>
<tr>
<td>75630 Aortography, abdominal plus bilateral iliofemoral lower extremity, catheter, by serialography, (S&amp;I)</td>
</tr>
</tbody>
</table>
"Selective catheter placement" means the catheter must be moved, manipulated or guided into a part of the arterial system other than the aorta or vessel punctured, generally under fluoroscopic guidance."

"Imagine the vascular system as a tree. The main trunk (aorta) has several major branches (primary branches). From each of the primary branches, secondary branches arise; the secondary branches give rise to tertiary branches. In the arterial system, catheter placement in a primary branch will be described as a first order catheterization. Selective catheterization of a secondary branch is a second order selective catheterization, etc. A single primary branch, with all of its secondary and tertiary branches constitutes a vascular family. One must be familiar with the anatomy of the arterial system to know to which vascular family each artery belongs. The definition of a vascular family is a group of vessels (arteries) which are fed by a primary branch of the aorta or a primary branch of the vessel punctured."

Within each vascular family, only the highest order catheterization is coded. This will include all of the work involved in getting to that artery.

To correctly code arterial procedures, you must know the puncture site and the final position of the catheter.

NOTE: DO NOT CODE SELECTIVE AND NON-SELECTIVE CODES FROM THE SAME ACCESS (ONLY ONE EXCEPTION). ONCE YOU GO SELECTIVE YOU DROP THE NON-SELECTIVE CODE.

Selective arterial codes include:

36215 Selective catheter placement, arterial system; each first order thoracic or brachiocephalic branch, within a vascular family
36216 second order thoracic or brachiocephalic, within a vascular family
36217 third order or higher thoracic or brachiocephalic, within a vascular family
36218 additional second order, third, and beyond thoracic or brachiocephalic, within a vascular family (list in addition to code for initial second or third order vessel as appropriate)
36245 Selective catheter placement, arterial system; each first order abdominal, pelvic or lower extremity artery branch, within a vascular family
36246 each second order abdominal, pelvic or lower extremity artery branch, within a vascular family
36247 each third order or more selective abdominal, pelvic or lower extremity artery branch, within a vascular family
36248 additional second order, third order, and beyond, abdominal, pelvic or lower extremity artery branch, within a vascular family (list in addition to code for initial second or third order vessel as appropriate)
Samples of selective catheter coding above the diaphragm*:

<table>
<thead>
<tr>
<th>Arch Aortogram and Bilateral Selective Common Carotid Angiograms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>36215</td>
</tr>
<tr>
<td>36216</td>
</tr>
<tr>
<td>75650</td>
</tr>
<tr>
<td>75680</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arch Aortogram &amp; Bilateral Selective Common Carotid Angiograms with AP and Lateral Head Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>36215</td>
</tr>
<tr>
<td>36216</td>
</tr>
<tr>
<td>75650</td>
</tr>
<tr>
<td>75680</td>
</tr>
<tr>
<td>75671</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Four Vessel Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>36215</td>
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<tr>
<td>36216</td>
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<tr>
<td>36217</td>
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<tr>
<td>36218</td>
</tr>
<tr>
<td>75680</td>
</tr>
<tr>
<td>75671</td>
</tr>
<tr>
<td>75685 x 2</td>
</tr>
</tbody>
</table>

* Additional modifiers (i.e., '59) may also be necessary, check with your local Medicare or third party payer for specific instructions
Venous Interventional Procedures

Just as with arterial procedures, venous catheterizations are described as non-selective or selective.

Non-selective placement would be "direct puncture of peripheral veins and the vena cavae, as well as placement of the catheter in the IVC and SVC by any route."

Non-selective venous codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36000</td>
<td>Introduction of catheter or intracatheter, vein</td>
</tr>
<tr>
<td>36005</td>
<td>Injection procedure for contrast venography</td>
</tr>
<tr>
<td>36010</td>
<td>Introduction of catheter, IVC or SVC</td>
</tr>
<tr>
<td>36400</td>
<td>Venipuncture, under age 3 years; femoral, jugular or sagittal sinus</td>
</tr>
<tr>
<td>36405</td>
<td>scalp vein</td>
</tr>
<tr>
<td>36406</td>
<td>other vein</td>
</tr>
<tr>
<td>36410</td>
<td>Venipuncture, child over age 3 years or adult, necessitating physician's skill (separate procedure), for diagnostic or therapeutic purposes. Not to be used for routine venipuncture.</td>
</tr>
<tr>
<td>36420</td>
<td>Venipuncture, cutdown; under age 1 year</td>
</tr>
<tr>
<td>36425</td>
<td>age 1 or over</td>
</tr>
</tbody>
</table>

Examples:

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral Venogram</td>
<td>36005 x 2</td>
</tr>
<tr>
<td></td>
<td>75822 Venogram, extremity, bilateral, (S&amp;I)</td>
</tr>
<tr>
<td>Inferior Vena Cavagram, IVC Filter</td>
<td>36010 IVC vein</td>
</tr>
<tr>
<td></td>
<td>37620 IVC filter</td>
</tr>
<tr>
<td></td>
<td>75825 IVC (S&amp;I)</td>
</tr>
<tr>
<td></td>
<td>75940 Percutaneous IVC filter, (S&amp;I)</td>
</tr>
</tbody>
</table>

"Selective catheterization of the venous system includes catheter placement in those veins which arise from the vena cava or the vein punctured directly (primary branches) and any subsequent (secondary) branches of the primary venous branches. As with the arterial system, all selective catheterization codes include the non-selective work of access of those veins directly punctured."

Selective venous codes:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36011</td>
<td>Selective catheter placement, venous system; first order branch (eg, renal vein, jugular vein)</td>
</tr>
<tr>
<td>36012</td>
<td>second order or higher (eg, left adrenal vein, petrosal sinus)</td>
</tr>
</tbody>
</table>

In the venous system, there are no codes for each additional second, third or higher order catheterizations. Therefore, codes must be reused to describe the total number of separate catheterizations performed during a given procedure.
Example:

<table>
<thead>
<tr>
<th>Procedure Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral Main Renal Vein Renin Samples with Venography &amp; Peripheral Sampling</td>
<td>76011 x 2</td>
</tr>
<tr>
<td>Venous catheterization for selective organ blood sampling</td>
<td>76500 x 2</td>
</tr>
<tr>
<td>Bilateral renals, (S&amp;I)</td>
<td>75833</td>
</tr>
<tr>
<td>Venous sampling (bilateral), (S&amp;I)</td>
<td>75893 x 2</td>
</tr>
</tbody>
</table>

In the venous system there are no codes for each additional second, third or higher order catheterization. Therefore, codes must be reused to describe the total number of separate catheterizations performed during a given procedure.

**Pulmonary, Portal and Lymphatic** catheterizations are basically handled in a similar manner.

Codes to describe pulmonary angiograms include:

- 36013 Introduction of catheter, right heart or main pulmonary artery
- 36014 Selective catheter placement, right or left pulmonary artery
- 36015 Selective catheter placement, segmental or subsegmental pulmonary artery

Example:

<table>
<thead>
<tr>
<th>Procedure Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bilateral Main Right &amp; Left Pulmonary Arteriograms</td>
<td>36014 x 2</td>
</tr>
<tr>
<td>Bilateral pulmonary arteries</td>
<td></td>
</tr>
<tr>
<td>Pulmonary arteriogram, (S&amp;I)</td>
<td>75743</td>
</tr>
</tbody>
</table>

The following code is available for portal vascular catheterization:

- 36481 Percutaneous portal vein catheterization by any method
Non-Vascular Interventional Genitourinary (GU) Anatomy

The genitourinary system includes the kidneys and the collecting system, which consists of calyces, renal pelvis, ureter and urinary bladder. Frequently, interventions are necessary to allow drainage of urine from the kidney or collecting system. This is accomplished by draining the urine externally via a catheter placed into the collecting system; placement of a catheter which can drain urine either externally or internally; or placement of an internal stent which drains urine from the kidney into the bladder via an internal catheter only. The codes to describe some common GU interventional procedures include:

**Antegrade pyelogram**
- 50390: Aspiration and/or injection of renal cyst or pelvis by needle, percutaneous
- 74425: Urography, antegrade, (S&I)

**VCUG**
- 51600: Injection procedure for cystography or voiding urethrocytography
- 74455: Urethrocytography, voiding, (S&I)

**Percutaneous nephrostomy**
- 50392: Introduction of intracatheter or catheter into renal pelvis for drainage and/or injection, percutaneous
- 74475: Introduction of intracatheter or catheter into renal pelvis for drainage and/or injection, percutaneous, (S&I)

**Dilatation of ureter**
- 52351: Cystourethroscopy, with ureteroscopy and/or pyeloscopy; diagnostic
- 74485: Dilation of nephrostomy, ureters, or urethra, (S&I)

**Nephrostomy tube change**
- 50398: Change of nephrostomy or pyelostomy tube
- 75984: Change of percutaneous tube or drainage catheter with contrast monitoring, (S&I)

Code separately for each portion of the interventional procedure. Do not consider one portion inherent in the other. For instance, if performing a percutaneous nephrostomy following an antegrade pyelogram, use 74425, 50390, 74475 and 50392.
**Biliary System**

Bile is produced by the liver and secreted into the biliary system. Its anatomy is similar to a tree. The smallest (most distal branches) are intrahepatic bile ducts. Many of these join to form the right hepatic duct and the left hepatic duct, which drain the right and left lobes of the liver, respectively. These ducts join to form the common hepatic duct, which drains out of the liver. It is joined by the cystic duct coming from the gallbladder. Together they make up the common bile duct. This is the main "trunk" of the biliary tree, and it drains into the small intestine, generally the duodenum. Interventional management frequently requires non-surgical drainage of blocked ducts by endoscopy or percutaneous drainage.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>47505</td>
<td>Injection procedure for cholangiography through an existing catheter</td>
</tr>
<tr>
<td>74305</td>
<td>Cholangiography; postoperative, radiological S&amp;I</td>
</tr>
</tbody>
</table>

**T-tube**

47556 x ___ Biliary endoscopy, percutaneous via T-tube or other tract; with dilation of biliary duct stricture(s) with stent

74363 x ___ Percutaneous transhepatic dilation of biliary duct stricture with or without placement of stent, radiological S&I

Submit each code according to the number of strictures treated. If multiple strictures are treated in the same location, submit only once.

**Additional Resources**

No single source can make you an expert in documentation and coding, particularly interventional. For additional information on interventional coding, the following are available.

Society of Cardiovascular & Interventional Radiology (SCVIR)
(888) 695-9733

*Interventional Radiology Coder: An Easy-to-Use Tool for Coding and Reimbursement Compliance, 2000 Edition*
MedLearn
(800) 252-1578

*Interventional Radiology Coding Made Easy! Volume I: Head & Neck, Vol. II: Lower Extremities*
Medical Asset Management, Inc.
(888) 966-5981

*Interventional color-coded Illustrations by Vascular Order*
(Set of 12 laminated anatomy graphics)
Medical Asset Management, Inc.
(888) 966-5981

*Revised January 30, 2002*
Revenue Codes
Surgical procedures reported as component parts of interventional procedures should be reported with revenue code 360 or 361. Some fiscal intermediaries prefer revenue code 490. Collaborate with your billing office to meet requirements of the local intermediary.

NOTE: INJECTION IS INHERENT IN:
- CT & MRI/MRA with contrast
- Diagnostic nuclear medicine procedures (except for the LP done for CSF flow / Cisternogram / Ventriculogram)
- IVP's or IVU's

Computed Tomography and Magnetic Resonance Imaging

Limited versus Extended CT and MRI Procedures

a. Slices and Prices

Nowhere is Medicare's fee limit policy more important to understand than with complex CT and MRI procedures, where it is common to perform significant extra work on many patients. Frequently, extra cuts, slices or sequences are required after a physician has reviewed output from a routine procedure. It has become common practice to see charges for additional sequences, extended procedures, etc.

However, there is no HCPCS code to report additional CT or MRI work. In fact, Medicare and many other third-party payers will not pay any more for additional work than the amounts set for the routine procedure.

Nevertheless, hospital radiology departments may wish to establish various lines in their chargemaster to reflect "limited" procedures (when such procedures are performed with fewer slices than usual), or to reflect "extended" work (for additional slices or sequences). In all cases, procedures should be accompanied by the site or organ specific HCPCS code. Remember that Medicare will not allow more than the fee schedule maximum in any case. An approach might look something like this:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>74181</td>
<td>MRI abdomen, limited</td>
<td>$325.00</td>
</tr>
<tr>
<td>74181</td>
<td>MRI abdomen, routine</td>
<td>$515.00</td>
</tr>
<tr>
<td>74181</td>
<td>MRI abdomen, extended</td>
<td>$675.00</td>
</tr>
</tbody>
</table>

For CT CPT code 76380 (limited or localized follow-up CT) should also be considered.

b. Modifier -22 (Physicians and Freestanding Facilities Only)

Medicare has provided physicians and freestanding facilities with some latitude for charges related to procedures that require additional time, additional CT slices, additional MRI sequences. Modifier "-22" may be used to reflect services greater than usually required and if the circumstances warrant might be acceptable to other third-party payers for additional reimbursement.
Be aware that the use of "-22" modifier will not guarantee payment above the established fee schedule amounts. HCFA has stated that its willingness to pay more than fee schedule payment limits will be "limited" and based on clear documentation of medical necessity.

**CT and MRI Procedures Requiring Contrast Media**

a. Without, With, and Without Followed by With Contrast Material

2001, brought changes to add CPT® codes to describe without contrast, with contrast, and without followed by with contrast and further sequences for all types of MRIs. Each approach has a distinct HCPCS code and each has a separate Medicare radiology fee schedule payment limitation.

For those codes performed using contrast material for imaging enhancement, the phrase "with contrast" represents contrast material administered either intravenous or intrathecal. Oral and rectal contrast is optional, and should be considered "without contrast."

Be especially cautious when coding procedures that employ "without followed by with contrast" methodology. While it is tempting to charge for two separate procedures it is inappropriate when a single "combination" HCPCS code exist.

Be aware that fee limits for "with contrast" procedures include an allowance for the cost of the contrast material. No additional payment will be made except for the use of low osmolar contrast when medically necessary, documented, and billed correctly.

Can code 36000 (introduction of needle or intracatheter, vein) be used to describe intravenous access during CT or MRI? No. Administration of contrast has been valued in the basic examination and intravenous access should not be separately reported.

**CT Followed Myelography**

Some controversy exists about coding CT procedures following myelography when contrast material has been injected as part of the myelogram. The CT should be coded "with contrast" because the language for supervision and interpretation has been changed to read "Contrast material in CT of spine is either by intrathecal or intravenous injection. For intrathecal injection, use also 61055 or 62284. IV injection of contrast material is part of the CT procedure."

**Combination Procedures**

CT and MRI procedures that combine adjacent areas (i.e., abdomen and pelvis) are often charged as two procedures, only to be rejected by third-party payers. Most third-party payers, including Medicare, will pay for these types of procedures only when the medical necessity of both areas is clearly established by the diagnosis codes reported. It will often be necessary to submit copies of the patient record.

**CT/MRI Reconstruction**

HCPCS code 76375 can be used in addition to routine CT, MRI, or other tomographic modality procedures when coronal, sagittal, multiplanar, oblique, 3-dimensional and/or holographic reconstruction techniques are employed. There is a common
misunderstanding that CPT code 76357 is used to bill for CT/MRI imaging procedures originally performed in the coronal, sagittal, multiplanar and/or oblique planes. Actually it is used to report studies that have been reformatted from one plane into another (i.e., images originally taken in the axial plane are reformatted into the coronal plane). Because reconstruction is a separate procedure, it should be reported separately.

76375 should not be billed with any of the CT or MR angiography procedures, since this is inherent in the procedure.

**Bony Windows**

"Bony window" manipulations should not be confused with reconstruction techniques. "Bony window" when constructed should be considered a part of the CT procedure itself. As such, Medicare and many other third-party payers will make no additional payment.

**CT Guidance Procedures**

Interventional procedures performed with CT guidance (cyst aspiration, abscess drainage, needle biopsy, etc.) must be assigned codes that describe the imaging component (radiologic supervision and interpretation) along with an additional code(s) to describe the catheter insertion and/or injection procedure performed. Imaging components are:

- 75989 Radiological guidance (i.e., fluoroscopy, ultrasound, or computed tomography) for percutaneous drainage (e.g., abscess, specimen collection), with placement of catheter, radiological supervision and interpretation
- 76360 Computerized axial tomographic guidance for needle placement (e.g., biopsy, aspiration, injection, localization device), radiological supervision and interpretation

**Radiation Therapy Field Placement**

HCPCS code 76370 is available to report CT guidance for placement of radiation therapy fields. Hospitals frequently overlook charging for this work when performed on interdepartmental patients from the hospital's radiation therapy department or cancer treatment center. Be certain to accompany HCPCS code 76370 with revenue code in the range 35X (not 333).

**Cardiac MRI**

Code 75533, cardiac MRI, existed by itself through 1993. The procedure description for 75553 has been modified to include the phrase “...morphology; with contrast material,” and three new procedures codes have been added. If you are performing cardiac MRI procedures, take note of the changes:

- 75333 Cardiac MRI for morphology; with contrast material
- 75554 Cardiac MRI for function, with or without morphology; complete study
- 75555 Cardiac MRI for function, with or without morphology; limited study
- 75556 Cardiac MRI for velocity flow mapping

Be certain these new listings are accompanied by UB-92 revenue code in the 61X range. Medicare
Breast MRI

Two new codes for MRI of the breast were added in 1995:

76093 MRI, breast, without and/or with contrast material(s); unilateral

For the specific ICD-9-CD coverage codes in your area check your payers website or www.lmrp.net.

Magnetic Resonance Angiography (MRA) –
HHS – HCFA Program Memorandum Intermediaries/Carriers
Transmittal No. AB-99-34, June 1999
www.hcfa.gov/pubforms/transmit/AB993460.htm

Effective for claims with dates of service on or after July 1, 1999, Medicare provides limited coverage for magnetic resonance angiography (MRA) of the abdomen and chest as described in the Medicare Coverage Issues Manual, §50-14. Previously, MRA of peripheral vessels of the lower extremities and of the head and neck had been covered. Those coverages continue in effect. MRA is covered for these diagnostic applications only as a substitute for contrast angiography, except when it is medically necessary to do both tests. All other uses of MRA are not covered.

The following instructions come directly from Medicare Coverage Issues Manual, Transmittal No. 117, Date June 1999. The correct CPT codes to be used for this expansion of coverage of MRA for chest and abdomen are 71555 and 74185. The underlined text represents the changes.

"Section 50-14, Magnetic Resonance Angiography, expands the national policy to allow for coverage of MRA for diagnostic evaluation of the abdomen and the chest. Specifically, this manual change may provide Medicare coverage for preoperative evaluation and to determine the extent of abdominal aortic aneurysm. In addition, Medicare may allow coverage of MRA for the diagnosis of pulmonary embolism and the evaluation of thoracic aortic dissection and aneurysm.

Among the advantages of MRI are the absence of ionizing radiation and the ability to achieve high levels of tissue contrast resolution without injected iodinated radiological contrast agents. Recent advances in technology have resulted in development, and FDA approval, of new paramagnetic contrast agents for MRI which allow even better visualization in some instances. Multi-slice imaging and the ability to image in multiple planes, especially sagittal and coronal, have provided flexibility not easily available with other modalities. Because cortical (outer layer) bone and metallic prostheses do not cause distortion of MR images, it has been possible to visualize certain lesions and body regions with greater certainty than has been possible with CT. The use of MRI on certain soft tissue structures for the purpose of detecting disruptive, neoplastic, degenerative, or inflammatory lesions has now become established in medical practice.

Covered Clinical Applications - Although several uses of MRI are still considered investigational and some uses are clearly contraindicated (see subsection D), MRI is considered medically efficacious for a number of uses. Use the following descriptions as general guidelines or examples of what may be considered covered rather than as a restrictive list of specific coverages. Coverage is limited to MRI units that have received FDA pre-market approval, and such units must be operated within the parameters specified by the approval. As with all items and services, the services must be reasonable and necessary for the diagnosis or treatment of the specific patient involved.

MRI is useful in examining the head, central nervous system, and spine. Multiple sclerosis can be diagnosed with MRI and the contents of the posterior fossa are visible. The inherent tissue contrast resolution of MRI makes it an appropriate standard diagnostic modality for general neuroradiology.
MRI can assist in the differential diagnosis of mediastinal and retroperitoneal masses, including abnormalities of the large vessels such as aneurysms and dissection. When a clinical need exists to visualize the parenchyma of solid organs to detect anatomic disruption or neoplasia, this can be accomplished in the liver, urogenital system, adrenals, and pelvic organs without the use of radiological contrast materials. When MRI is considered reasonable and necessary, the use of paramagnetic contrast materials may be covered as part of the study. MRI may also be used to detect and stage pelvic and retroperitoneal neoplasms and to evaluate disorders of cancellous bone and soft tissues. It may also be used in the detection of pericardial thickening. Primary and secondary bone neoplasm and aseptic necrosis can be detected at an early stage and monitored with MRI. Patients with metallic prostheses, especially of the hip, can be imaged in order to detect the early stages of infection of the bone to which the prosthesis is attached.

Effective for services provided on or after March 22, 1994, MRI may also be covered to diagnose disc disease without regard to whether radiological imaging has been tried first to diagnose the problem.

Gating Devices and Surface Coils (Effective for Services On or After March 4, 1991) - Gating devices which eliminate distorted images caused by cardiac and respiratory movement cycles are now considered state of the art techniques and may be covered. Surface and other specialty coils may also be covered, as they are used routinely for high-resolution imaging where small limited regions of the body are studied. They produce high signal-to-noise ratios resulting in images of enhanced anatomic detail.

Contraindications and Noncovered Uses

1. Contraindications -- MRI is not covered when the following patient-specific contraindications are present. It is not covered for patients with cardiac pacemakers or with metallic clips on vascular aneurysms. MRI during a viable pregnancy is also contraindicated at this time. The danger inherent in bringing ferromagnetic materials within range of MRI units generally constrains the use of MRI on acutely ill patients requiring life support systems and monitoring devices which employ ferromagnetic materials. In addition, the long imaging time and the enclosed position of the patient may result in claustrophobia, making patients who have a history of claustrophobia unsuitable candidates for MRI procedures.

2. Noncovered Uses -- Several uses of MRI have been identified as investigational and are not covered. These include measurement of blood flow and spectroscopy. In addition, MRI is not suitable for the imaging of cortical bone and calcifications and for procedures involving spatial resolution of bone or calcifications.

Magnetic Resonance Angiography

Magnetic resonance angiography (MRA) is an application of magnetic resonance imaging (MRI) that provides visualization of blood flow, as well as images of normal and diseased blood vessels. While MRA appears to be a rapidly developing technology, the clinical safety and effectiveness of this procedure for all anatomical regions has not been proven. As a result, Medicare will provide coverage for MRA on a limited basis. Below are the only indications for which Medicare coverage is allowed for MRA. All other uses of MRA will not be covered.

A. Head and Neck.--Studies have proven that MRA is effective for evaluating flow in internal carotid vessels of the head and neck. However, not all potential applications of MRA have been proven effective. As a result, all of the following criteria must apply in order for Medicare to provide coverage for MRA of the head and neck:
1. MRA is used to evaluate the carotid arteries, the circle of Willis, the anterior, middle or posterior cerebral arteries, the vertebral or basilar arteries or the venous sinuses;

2. MRA is performed on patients with conditions of the head and neck for which surgery is anticipated and may be found to be appropriate based on the MRA. These conditions include, but are not limited to, tumor, aneurysms, vascular malformations, vascular occlusion or thrombosis. Within this broad category of disorders, medical necessity is the underlying determinant of the need for an MRA in specific diseases. The medical records should clearly justify and demonstrate the existence of medical necessity.

3. MRA and contrast angiography (CA) are not expected to be performed on the same patient for diagnostic purposes prior to the application of anticipated therapy. Only one of these tests will be covered routinely unless the physician can demonstrate the medical need to perform both tests.

B. Peripheral Arteries of Lower Extremities. --Studies have proven that MRA of peripheral arteries is useful in determining the presence and extent of peripheral vascular disease in lower extremities. This procedure is non-invasive and has been shown to find occult vessels in some patients for which those vessels were not apparent when CA was performed. Medicare will cover either MRA or CA to evaluate peripheral arteries of the lower extremities. However, both MRA and CA may be useful in some cases, such as:

1. A patient has had CA and this test was unable to identify a viable run-off vessel for bypass. When exploratory surgery is not believed to be a reasonable medical course of action for this patient, MRA may be performed to identify the viable runoff vessel.

2. A patient has had MRA, but the results are inconclusive.

C. Abdomen. --Studies have proven that MRA is considered a reliable diagnostic tool for the pre-operative evaluation of patients who will undergo elective abdominal aortic aneurysm (AAA) repair. In addition, scientific data has revealed that MRA is considered comparable to CA in determining the extent of AAA, as well as evaluation of aorto-iliac occlusion disease and renal artery pathology that may be necessary in the surgical planning for AAA repair. These studies also reveal that MRA could provide a net benefit to the patient. If preoperative angiography is not necessary, then patients are not exposed to the risks associated with invasive procedures, contrast media, end-organ damage or arterial injury. As with coverage of MRA for other anatomical sites, Medicare will provide coverage for either MRA or CA and not both tests on a routine basis. The physician may choose between CA or MRA for pre-operative imaging, after other tests such as computed tomography (CT) or ultrasound have been used to diagnose AAA and evaluate aneurysm size over time. However, both MRA and CA may be used when the physician can demonstrate the medical need for both tests to be performed, such as when a follow-up CA is necessary to clarify renal artery pathology, which might not be diagnosed definitively by an initial MRA.

D. Chest.

1. Diagnosis of Pulmonary Embolism - Current scientific data has shown that diagnostic pulmonary MRAs are improving due to recent developments such as faster imaging capabilities and gadolinium-enhancement. However, these advances in MRA are not significant enough to warrant replacement of pulmonary angiography in the diagnosis of pulmonary embolism for patients who have no contraindication to receiving intravenous
iodinated contrast material. Patients who are allergic to iodinated contrast material face a high risk of developing complications if they undergo pulmonary angiography or computed tomography angiography. Therefore, Medicare will cover MRA of the chest for diagnosing a suspected pulmonary embolism when it is contraindicated for the patient to receive intravascular iodinated contrast material.

2. Evaluation of Thoracic Aortic Dissection and Aneurysm - Studies have shown that MRA of the chest has a high level of diagnostic accuracy for pre-operative and post-operative evaluation of aortic dissection of aneurysm. Depending on the clinical presentation, MRA may be used as an alternative to other non-invasive imaging technologies, such as transesophageal echocardiography and CT. Generally, Medicare will provide coverage only for MRA or for CA when used as a diagnostic test. However, if both MRA and CA of the chest are used, the physician must demonstrate the medical need for performing these tests.

While the intent of this policy is to provide reimbursement for either MRA or CA, HCFA is also allowing flexibility for physicians to make appropriate decisions concerning the use of these tests based on the needs of individual patients. HCFA anticipates, however, low utilization of the combined use of MRA and CA. As a result, HCFA encourages contractors to monitor the use of these tests and, where indicated, requires evidence of the need to perform both MRA and CA.

High Dose MRI – (refer to FQA-541, Memorandum, May 16, 1994)

HCFA established a supply code A4643 that allows separate payment only for the second injection (0.2mmol/kg) in those patients suspected of having cerebral metastases or other poorly enhancing lesions, in the presence of negative or equivocal scans (effective May 1994). The descriptor reads "MRI, additional high dose injection of contrast material(s), eg, gadoteridol injection, (consistent with contrast labeling criteria)."

It is billed with CPT codes 70553, 72156, 72157 and 72158.

Payment will be based on the lower of the estimated acquisition cost or the national average wholesale price of the pharmaceutical. Check with your business office to determine the appropriate revenue code.

With the implementation of APCs for hospital outpatients A4643 is in a status "N" (incidental services, packaged into APC rate). However, we recommend that you continue to bill this HCPCS code for possible transitional payment.

MRI Spectroscopy

Proton magnetic spectroscopy is newly developed signal localizing technique that works by suppressing the signal from water and fat protons. In the medical field of neuroradiology, proton MRS has been introduced as a possible diagnostic tool in a number of clinical applications including brain neoplasms, cerebrovascular accidents, detection of lesion causing epilepsy and other brain disorders.

A new CPT code was added in 1998 to describe this service:

76390 Magnetic resonance spectroscopy

Medicare will not-cover this test. Written advanced notification must be given to Medicare beneficiaries before the provider may bill the patient.
Diagnostic Ultrasound

Real-time ultrasound scans are two-dimensional procedures displaying both structure and motion with time. B-scan procedures display two-dimensional structure only. M-Mode procedures record the amplitude and velocity (one-dimensional) of moving structures that produce echoes. The HCPCS/CPT codes for ultrasound procedures range from 76506 through 76999; the revenue code is 402.

Chest

a. Breast Echography

CPT/HCPCS code 76645 should be reported for both unilateral and/or bilateral procedures. Consider distinguishing between the two by reducing charges for the unilateral procedure.

Abdomen and Retroperitoneum

**Abdominal** -- Procedure code 76700 (echography, abdominal, B-scan and/or real time with image documentation; complete) describes a complete ultrasound examination of the upper abdomen from the diaphragm to the level of the umbilicus. It will include gray-scale real-time or static images of the liver, spleen, gallbladder common duct, pancreas and hollow upper abdominal viscera. The examination will include views of each kidney showing the renal length and renal sinus and evaluate any incidental renal masses. Vessels including the inferior vena cava and upper abdominal aorta and masses in the mesentery or within the peritoneal cavity can also be assessed with this code.

Code 76705 (echography, abdominal, B-scan and/or real time with image documentation, limited [eg, single organ, quadrant, follow-up]), describes an examination which is limited to either a single organ or a limited area of the abdomen such as an examination of the liver only or an examination of the right upper quadrant. This code can also be used for a limited follow-up examination (e.g., of a liver mass or a gallbladder).

**Retroperitoneal** -- Procedure code 76770 (echography, retroperitoneal [e.g., renal, aorta, nodes], B-scan and/or real time with image documentation; complete) refers to an examination of the retroperitoneal structures some of which overlap with the abdominal code. A complete retroperitoneal examination would include images of the aorta, inferior vena cava, retroperitoneal structures and retroperitoneal lymph nodes. A retroperitoneal examination could also include a complete examination of the kidneys, ureters, and urinary bladder. When examining retroperitoneal vascular structures, it is appropriate to perform an examination of branches of the structures as well as examining the iliac vessels.

CPT/HCPCS code 76775 (limited) refers to an examination of one retroperitoneal organ or area or a follow-up examination of a limited area (eg, abdominal aorta for aneurysm).

HCPCS code 76778 is to be used specifically when the procedure involves transplanted kidney(s). Note that the code describes procedures that are performed either with or without duplex Doppler methodology.
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Pelvis

a. Obstetric Echocardiography (Pregnant Patient)

When using codes 76805 through 76818 for obstetrics-related procedures, be certain to discriminate carefully between them for complete versus limited applications, for initial versus follow-up studies, multiple gestations, etc.

b. Fetal Echocardiography

An expanded set of codes for echocardiography studies of the fetal cardiovascular system have been included in CPT:

- 76826 Echocardiography, fetal, cardiovascular system, real time with image documentation (2D) with or without M-mode recording; follow-up or repeat study
- 76827 Doppler echocardiography, fetal, cardiovascular system pulsed wave and/or continuous wave with spectral display; complete follow-up or repeat study

76828

c. Color Flow Velocity Mapping

Whenever color flow velocity mapping is performed in conjunction with any of the following CPT codes 76825, 76826, 76827, 76828, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93320, 93321, or 93350 procedures, CPT/HCPCS code 93325 may be reported in addition to the code for the primary purposes.

d. Non-obstetric Pelvic Echography

CPT/HCPCS code 76856 describes a complete echographic study of the non-pregnancy uterus, performed with an external transducer. Code 76857 describes a limited or follow-up procedure, performed to confirm a suspected condition, to evaluate a known condition, or to follow the progress of treatment for a known condition.

CPT/HCPCS code 76830 is used to describe transvaginal echography, employed often in evaluating uterine, ovarian and adnexal symptoms through the use of an intervaginal transducer.

e. Hysterosonography

A new CPT code was added in 1998 to describe hysterosonography:

- 76831 Hysterosonography, with or without color flow Doppler
  (for introduction of saline or contrast for hysterosonography, see 58340)
f. Genitalia

Use CPT/HCPCS code 76872 only when the procedure requires use of a transrectal probe.

**Extremities**

a. Non-vascular Only

The CPT/HCPCS code listed for extremity echography (76880) is to be used for non-vascular procedures. As of 1992, all vascular echographic procedures must be reported with codes from the 93875-93981 range.

**Peripheral Vascular Imaging**

These procedures include all of the patient care and resources necessary to their being performed, the production of hard copy output, and bi-directional vascular flow or imaging when performed. The procedures may be performed either with standard or with duplex methodology. Code descriptions specify the methodology, as well as whether the procedure is bilateral or limited.

Duplex scanning involves complete procedures displaying both two-dimensional and motion with time. Doppler signal documentation with spectral analysis and/or color flow velocity mapping or imaging is included.

a. Cerebrovascular Arterial Studies

93875 Non-invasive physiologic studies of extracranial arteries, complete bilateral (eg, periorbital flow direction with arterial compression, oculal pneumoplethysmography, Doppler ultrasound spectral analysis)
93880 Duplex scan of extracranial arteries; complete bilateral study
93882 unilateral or limited study
93886 Transcranial Doppler study of the intracranial arteries; complete study
93888 limited study

b. Extremity Arterial Studies (Including Digits)

93922 Noninvasive physiologic studies of upper or lower extremity arteries, single level, bilateral (eg, ankle/brachial indices, Doppler waveform analysis, volume plethysmography, transcutaneous oxygen tension measurement)
93923 Noninvasive physiologic studies of upper or lower extremity arteries, multiple levels or with provocative functional maneuvers, complete bilateral study (eg, segmental blood pressure measurements, segmental Doppler waveform analysis, segmental volume plethysmography, segmental transcutaneous oxygen tension measurements, measurements with postural provocative tests, measurements with reactive hyperemia)
93924 Noninvasive physiologic studies of lower extremity arteries, at rest and following treadmill stress testing, complete bilateral study
93925 Duplex scan of lower extremity arteries or arterial bypass grafts; complete bilateral study
c. Extremity Venous Studies (Including Digits)

93965 Noninvasive physiologic studies of extremity veins, complete bilateral study (eg, Doppler waveform analysis with responses to compression of other maneuvers, phleborheography, impedance plethysmography)

93970 Duplex scan of extremity veins including responses to compression and other maneuvers; complete bilateral study

93971 unilateral or limited study

d. Visceral and Penile Vascular studies

93975 Duplex scan of arterial inflow and venous outflow of abdominal, pelvic, scrotal contents and/or retroperitoneal organs; complete study

93976 limited study

93978 Duplex scan of aorta, inferior vena cava, iliac vasculature, or bypass grafts; complete study

93979 unilateral or limited study

93980 Duplex scan of arterial inflow and venous outflow of penile vessels; complete study

93981 follow-up or limited study

e. Revenue Codes

Hospitals reporting these procedures to Medicare on the UB-92 are required to accompany the CPT/HCPCS codes in the 93875-93990 range with revenue code 921.

Ultrasonic Guidance Procedures

Interventional procedures performed with ultrasound guidance (cyst aspirations, abscess drainage, needle biopsy, etc.) must be assigned codes that describe the imaging component (radiologic supervision and interpretation) along with an additional code or codes that describe the catheter insertion and/or injection procedure performed. These include:

76930 U/S guidance for pericardiocentesis, imaging S&I

76932 U/S for endomyocardial biopsy, imaging S&I

76936 U/S guided compression repair of arterial pseudo-aneurysm or arteriovenous fistulae (includes diagnostic ultrasound evaluation, compression of lesion and imaging)

76941 U/S guidance for intrauterine fetal transfusion or cordocentesis, imaging S&I

76942 U/S guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging S&I (revised 2001)

76945 U/S guidance for chorionic villus sampling, imaging S&I

76946 U/S guidance for amniocentesis, imaging S&I

76948 U/S guidance for aspiration of ova, imaging S&I
Nuclear Medicine

In nuclear medicine, technologists introduce radioactive substances into the body either orally or intravenously or by ventilated aerosol or gas. A special camera that registers radiation detects the radioactive substance as they circulate through the body and produces an image. The HCPCS/CPT codes for nuclear medicine range from 78000 through 79999; the revenue codes are 340, 341, 342 or 349.

General Principles

a. Single versus Multiple, Static versus Flow, etc.

Many nuclear medicine procedures can be performed in a variety of modalities (eg, single versus multiple determinations, static versus with vascular flow, limited area versus whole body, planar versus SPECT, etc.). Each recognized modality is represented by a modality-specific HCPCS/CPT code. Be certain to apply appropriate codes for the procedures performed.

b. SPECT Studies

If your department uses a SPECT camera, be sure to use the HCPCS/CPT codes that describe this technology. When performing a SPECT procedure in addition to a routine study, both exams should be charged.

The following are the SPECT codes you should have on your chargemaster:

78205 Liver imaging (SPECT)
78206 Liver imaging (SPECT); with vascular flow
78320 Bone and/or joint imaging; tomographic (SPECT)
78464 Myocardial perfusion imaging; (planar) tomographic (SPECT), single study at rest or stress (exercise and/or pharmacologic), with or without quantification
78465 Myocardial perfusion imaging; tomographic (SPECT), multiple studies, at rest or stress (exercise and/or pharmacologic), and redistribution and/or rest injection, qualitative or quantitative
78469 Myocardial imaging, infarct avid, planar; tomographic SPECT with or without quantification
78494 Cardiac blood pool imaging, gated equilibrium, SPECT, at rest, wall motion study plus ejection fraction, with or without quantitative processing
78607 Brain imaging; tomographic (SPECT)
78647 Cerebrospinal fluid flow, imaging (not including introduction of material); tomographic (SPECT)
78710 Kidney imaging; tomographic (SPECT)
Radiopharmaceuticals are not subject to the radiology payment limit, but are paid based on reasonable cost. HCPCS codes are required for billing. Report, as appropriate, with revenue codes 333, 34x, or 636.

79900  Provision of therapeutic radiopharmaceutical(s)
A4641  Diagnostic imaging agent (eg, MAA, DTPA, PYP, Ceretec™)
A4642  Satumomab Pendetide. per dose [OncoScint™]
A9500  Technetium Tc99m Sestamibi, per unit dose [ie, Cardiolite®, Miraluma™]
A9502  Technetium Tc99m Tetrofosmin, per unit dose [Myoview™]
A9503  Technetium Tc99m Medronate [MDP], up to 30 mCi
A9504  Technetium Tc99m Apcitide [AcuTect™]
A9505  Thallous Chloride TL 201/mCi [Thallium]
A9507  Indium-111 Capromab Pendetide, per dose [ie, ProstaScint®]
A9508  Iobenguane Sulfate I-131, per 0.5 mCi (I-131 MIBG) (new 2001)
A9510  Technetium Tc 99m Disofenin, per vial [Hepatolite™] (new 2001)
A9511  Technetirum TC 99m depreotide [NeoTect™] (new 2002)
A9600  Strontium-89 Chloride, per mCi [Metastron™]
A9605  Samarium sm 153 lexidronamm, 50 mCi [Quadramet™]
Q3002  Ga-67, per mCi [Gallium]
Q3003  Tc99m Bicisate, per unit dose [Neurolite®]
Q3004  Xe-133, per 10 mCi [Xenon]
Q3005  Tc99m Mertiatide, per mCi [Techneson Mag-3®]
Q3006  Tc99m Glucepatate, per 5 mCi [Glucoscan®]
Q3007  Sodium phosphate P-32, per mCi
Q3008  IN 111 Pentetreotide, per 3 mCi [Octreoscan®]
Q3009  TC99m Oxidronate, per mCi [HDP]
Q3010  TC-99m labeled red blood cells, per mCi [Ultratag®]
Q3011  Chromic phosphate P32 suspension, per mCi
Q3012  Cyanocobalamin Co57, per 0.5 mCi [Cobatope®]

(CMS assigns Q HCPCS codes to procedures, services and supplies on a temporary basis. When a permanent code is assigned, the Q code is deleted and cross-referenced.)
provision of a diagnostic imaging agent.

Also, HCPCS codes 77781, 77782, 77783 and 77784 include payment for the radiopharmaceutical in the technical component. So when these procedures are performed, do not bill for an additional radiopharmaceutical code.

Under the APC system for hospital outpatients, most radiopharmaceuticals are identified with a unique pass-through code. Check the most recent pass-through list for each separately billable HCPCS codes. Check [www.snm.org](http://www.snm.org) (APC link) for the latest information.

d. Kinevac® (sinicalide for injection)

Kinevac is a synthetic form of cholecystokinin (CCK), a hormone secreted by the mucosa of the upper intestine. Cholecystokinin stimulates contraction of the gallbladder and secretion of pancreatic enzymes.

Kinevac is injected intravenously and causes the gallbladder to contract. In addition to conventional radiology studies, Kinevac is also being used as an adjunct to hepatobiliary imaging with HIDA compounds such as Choletec® (kit for the preparation of technetium TC99m mebrofenin) in nuclear medicine.

At this time there is not a specific HCPCS code with which to bill Kinevac. Because Kinevac is not a radiopharmaceutical, it can not be billed separately using A4641. While some facilities attempt to bill Kinevac separately using the unclassified drug code J3490, it is recommended that the cost of administering Kinevac be factored into the overall charge for the procedure (78223).

e. Generation of Automated Data

Many nuclear medicine procedures, particularly heart and renal studies, often require computer assistance to manipulate and generate data. There are two HCPCS/CPT codes that can be used for charging for computer assistance to manipulate and generate data accompanying primary nuclear medicine procedures:

- 78890 Generation of automated data: interactive process involving nuclear physician and/or allied health professional personnel; simple manipulations and interpretation, not to exceed 30 minutes
- 78891 complex manipulations and interpretation, exceeding 30 minutes

In 1995, Medicare decided to "bundle" the payment for codes 78890 and 78891 in the primary nuclear medicine procedure.

While these codes will fail Medicare edits for billing purposes, other third-party insurance payers may continue to recognize and pay for them. A facility wishing to continue to submit these codes must decide, based upon its current payer mix, whether it is advantageous.

Cardiovascular System

a. Stress Procedures

Nuclear medicine cardiac stress testing procedures (stress thallium, stress MUGAs) are accompanied by a treadmill and/or a pharmacologic stress process under medical supervision. HCPCS/CPT code 93017 (cardiovascular stress test) should be charged in addition to the MUGA stress or stress thallium procedures being performed. Revenue code 482 must accompany HCPCS/CPT code 93017 on the hospital's UB-92. In some hospitals, the stress component is
performed outside the nuclear medicine area with the "stressed" patient brought to nuclear medicine for the imaging procedure. (Note: verify that the stress procedure is not being charged through another area, such as cardiology).

Pharmacologic stress is induced using an agent such as IV Persantine. This methodology can be employed instead of, or in addition to, mechanical stress. Separate cost-based payments for IV Persantine will be made in addition to payments made for the procedure. Hospitals report HCPCS code J1245 (Injection, dipyridamole [Persantine, IV], per 10 mg) or J0150 (Injection, adenosine, 6 mg) or J0151 (Injection, adenosine, 90 mg) with revenue code 636.

b. Pulmonary Perfusion Imaging

New code 78588, pulmonary perfusion imaging, particulate, with ventilation imaging, aerosol, one or multiple projections, has been added to CPT 1999. This new code combines the procedures included in the existing codes 78580, 78586 and 78587. The combined procedure reported with 78588 consists of imaging a patient twice: one after inhalation of a radioactive aerosol to determine pulmonary ventilation; and again after injection of a radioactive particulate to determine lung perfusion. This procedure is used to diagnose pulmonary embolism, bronchopulmonary sequestration, and pulmonary trauma. (Refer to CPT Assistant, March 1999 for more information.)

c. Cardiac Blood Pool Imaging

CPT 1999 established two new codes for reporting cardiac blood pool imaging:

78494 Cardiac blood pool imaging, gated equilibrium, SPECT, at rest, wall motion study plus ejection fraction, with or without quantitative processing
78496 Cardiac blood pool imaging, gated equilibrium, single study, at rest, with right ventricular ejection fraction by first pass technique (List separately in addition to code for primary procedure)

Code 78494 was added to describe the use of single photon emission tomography (SPECT) with cardiac blood pool, gated equilibrium. This technology provides the added benefit of 3-dimensional imaging, which provides improved assessment of regional wall function.

Code 78496 is an add-on code reported in addition to 78472 to allow for evaluation of right ventricular function, which requires use of both first pass and cardiac blood pool imaging, gated equilibrium. (Refer to CPT Assistant, June 1999).

**Positron Emission Tomography (PET) with Rubidium 82**

Positron emission tomography (PET), also known as positron emission transverse tomography (PETT), is a noninvasive imaging procedure that assesses perfusion and the level of metabolic activity in various organ systems of the human body. A positron camera is used to produce cross-sectional tomographic images by detecting radioactivity from a radioactive tracer substance (radiopharmaceutical) that is injected into the patient.

Until recently, Medicare considered these scans experimental and therefore not covered. HCFA
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a specific radiopharmaceutical (Rubidium 82), is no longer experimental and may be covered if
the conditions outlined in its policy are met and the testing is medically necessary, for dates of
service on or after March 14, 1995. Use revenue code 404 to report PET scans.

Because reimbursement is currently very limited contact your Bracco Reimbursement Specialist or
one of our Technical Associates for complete billing instructions and assistance.

**Positron Emission Tomography (PET) with FDG**

Coverage was expanded for services dated on or after July 1, 2001. Also, HCFA will no longer
require the designation of the four PET scan modifiers (N,E, P, S) and has made the
determination that no paper documentation needs to be submitted up front with PET scan claims.
The following is a brief summary of the expanded coverage (see HHS Program Memorandum
Intermediaries/Carriers, Transmittal AB-01-54, dated April 10, 2001 for complete information).

In 2002, new HCPCS codes were added as well as language in the descriptor to distinguish
between the type of equipment used, full- and partial-ring PET scanners only versus gamma
cameras only. PET HCPCS codes are G0210-G0230 for full- and partial-ring PET scanners and
G0231-G0234 for gamma cameras only. For specific information see Program Memo
Radiation Oncology

Every patient who receives radiation oncology treatments undergoes a definitive, multi-step treatment protocol determined by the physician. While the protocol will vary from patient to patient, the same questions should be asked and answered in every case to verify that all aspects of work actually being performed are being recorded and charged with the appropriate HCPCS/CPT codes. The steps to be evaluated are:

- Preliminary consultation (physician only)
- Clinical treatment planning (physician only)
- Treatment simulation
- Medical radiation physics
- Dosimetry
- Treatment devices
- Special services
- Clinical treatment by energy level (technical only)
- Port films (technical only)
- Clinical treatment management (physician only)
- Teletherapy versus brachytherapy
- Field setting procedures

One or more HCPCS/CPT codes are available to report each of the steps taken. In some cases, the codes selected will reflect whether the work performed was at a simple, intermediate or complex level. This level, initially established in the treatment plan, should prevail with all of the codes selected to represent all of the services provided for a given patient (i.e., a patient receiving an intermediate level of therapy will require an intermediate level treatment device). The HCPCS/CPT code numbers for radiation therapy range from 77261 through 77799; the appropriate revenue code is 333.

Preliminary Consultation (Clinical Management)

a. Physician-Only Services

Preliminary consultation with a patient, evaluation of a patient prior to a decision to treat, treatment management and/or full medical care are to be reported by the physician involved using evaluation and management (E & M) codes from the 99201 and above services. Selecting the appropriate code(s) depends specifically on patient history, examination, medical decision making, counseling, and coordination of care, nature of the presenting medical problem and time. E & M codes are predicated on the supposition that only a physician involved with a patient can determine the nature and extent of each of the factors in order to select the appropriate code(s).

b. Hospital Services

Hospitals do not perform preliminary consultations per se. These services often occur outside a hospital setting or with hospital inpatients.

However, in many cases, a radiation oncologist may perform preliminary consultations in a hospital's outpatient facility. In such cases, the hospital may report an E & M code (typically 99201) if the visit is only for the oncologist's consultation. While there are no technical
components of E & M codes, Medicare permits use of 99201 to describe "clinical visits." The Medicare Hospital Manual (publication 10) defines a "visit" as:

...a direct personal contact between a registered hospital outpatient and a physician or other person who is authorized by state licensure law and, where applicable, by hospital staff bylaws, to order or provide services for the patient for the purpose of diagnosis or treatment of the patient. A visit code is not to be reported if the sole reason for the visit was to undergo a laboratory, radiology, or diagnostic test, a surgical or medical procedure, or to receive psychiatric services, chemotherapy, physical therapy, occupational therapy, speech/language/hearing therapy or cardiac rehabilitation.

This approach permits both charge and information capture.

**Clinical Treatment Planning**

Treatment planning is an integral part of the overall radiation therapy methodology, providing the basis and directions for all therapeutic services. The process involves complex services provided by the radiation oncologist, often assisted by the radiation physicist, and requiring the support of the appropriate facility and its resources. Determining all of the billable aspects of the process can be confusing. If taken in context of an overall methodology no part of the process will be overlooked.

All new patients pass through this phase; appropriate charges should be generated according to level of complexity and location of activities.

**a. Physician-Only Services**

The clinical treatment planning process is a complex service including interpretation of special testing, tumor localization, treatment volume determination, treatment time/dosage determination, choice of treatment modality, determination of number and size of treatment ports, selection of appropriate treatment devices, and other procedures.

Treatment plans are designed at a simple, intermediate or a complex level, as follows:

77261 Therapeutic radiology treatment planning; **simple**
(Simple - planning requiring single treatment area of interest encompassed in a single port or simple parallel opposed ports with simple or no blocking.)

77262 Therapeutic radiology treatment planning; **intermediate**
(Intermediate - planning requiring three or more converging ports, two separate treatment areas, multiple blocks, or special time dose constraints.)

77263 Therapeutic radiology treatment planning; **complex**
(Complex - planning requiring highly complex blocking, custom shielding blocks, tangential ports, special wedges or compensators, three or more separate treatment areas, rotational or special beam considerations, combination of therapeutic modalities.)

These codes only describe the physicians’ professional services. There are no technical component for codes 77261, 77262, 77263. Reimbursement will be made for only one service per course of treatment.
Treatment Simulation

Treatment simulation is conducted at a simple, intermediate or a complex level, without regard to setting. Providers should report simulation services at the appropriate level, consistent with the level of complexity of the treatment plan using one of the following HCPCS/CPT codes:

- **77280** Therapeutic radiology simulation-aided field setting; **simple**
  (Simple - simulation of a single treatment area with either a single port or parallel opposed ports. Simple or no blocking.)

- **77285** Therapeutic radiology simulation-aided field setting; **intermediate**
  (Intermediate - simulation of three or more converging ports, two separate treatment areas, multiple blocks.)

- **77290** Therapeutic radiology simulation-aided field setting; **complex**
  (Complex - simulation of tangential portals, three or more treatment areas, rotation or arc therapy complex blocking, custom blocking, custom shielding blocks, brachytherapy source verification, hyperthermia probe verification, any use of contrast materials.)

- **77295** Therapeutic radiology simulation-aided field setting; **three-dimensional**
  (Three-dimensional computer-generated three dimensional reconstruction of tumor volume and surrounding critical normal tissue structures from direct CT scans and/or MRI data in preparation for non-coplanar or coplanar therapy. The simulation utilizes documented three-dimensional beam's eye view volume-dose displays of multiple or moving beams.)

The HCPCS/CPT code selected to represent the service reflects the work performed without regard to the methodology employed (using a dedicated simulator, a radiation therapy system or using diagnostic x-ray methodology). As per CPT definitions only one service will be covered at the time of initiation of treatment. Repeated set-ups until a satisfactory determination is made are not covered separately. If, during the course of a therapy program, there is a change in the patient's status, such as a new area requiring treatment or a treatment field is altered, additional simulations as defined by the appropriate CPT code will be reimbursed. The patient's chart must document the need for this additional service.

Medical Radiation Physics, Dosimetry, Treatment Devices and Special Services

a. Dosimetry Calculations and Medical Radiation Physics Consultations

Each radiation oncology patient is likely to undergo dosimetry calculations and other medical radiation physics consultations more than once during a treatment protocol.

- **77300** Basic radiation dosimetry calculation, central axis depth dose, TDF, NSD, gap calculation, off axis factor, tissue inhomogeneity factors, as required during course of treatment, only when prescribed by the treating physician

- **77331** Special dosimetry (eg, TLD, microdosimetry) (specify), only when prescribed by the treatment physician

- **77336** Continuing medical radiation physics consultation in support of therapeutic radiologist including continuing quality assurance reported per week of therapy

Revised January 30, 2002
77370 Special medical radiation physics consultation
(Only used to describe special medical physics charges when ordered by the treating physician, are medically necessary and cannot be described by another HCPCS code)

b. Isodose Planing for Teletherapy and Brachytherapy

77305 Teletherapy, isodose plan (whether hand or computer calculated); **simple** (one or two parallel opposed unmodified ports directed to a single area of interest)

77310 Teletherapy, isodose plan (whether hand or computer calculated); **intermediate** (three or more treatment ports directed to a single area of interest)

77315 Teletherapy, isodose plan (whether hand or computer calculated); **complex** (mantle or inverted Y, tangential ports, the use of wedges, compensators, complex blocking, rotational beam, or special beam considerations)

Only one teletherapy isodose plan may be reported for a given course of therapy to a specific treatment area).

For brachytherapy isodose calculations:

77326 Brachytherapy isodose calculation; **simple** (calculations made from simple plane, one to four sources/ribbon application, remote afterloading brachytherapy, 1 to 8 sources)

77327 Brachytherapy isodose calculation; **intermediate** (multiplane dosage calculations, application involving five to ten sources/ribbons, remote afterloading brachytherapy, 9 to 12 sources)

77328 Brachytherapy isodose calculation; **complex** (multiplane isodose plan, volume implant calculations over ten sources/ribbons used, special spatial reconstruction, remote afterloading brachytherapy, over 12 sources)

c. Treatment Devices

Treatment devices consist of a variety of items such as beam modifying and shaping blocks, patient immobilization devices, and beam modifiers such as wedges or compensators. There are three levels of complexity of treatment devices depending upon the difficulty of integrating the device into the overall treatment plan. In all cases, the physician must be directly involved in design, selection, and placement of any of these devices and full documentation of this involvement must be available. Multiple treatment devices may be charged during a course of therapy as modification of treatment portals may require revision of beam modifiers. Full documentation must accompany treatment device charges.

77332 Treatment devices, design and construction; **simple** (simple blocks, simple bolus)

77333 Treatment devices, design and construction; **intermediate** (multiple blocks, stents, bite blocks, special bolus)

77334 Treatment devices, design and construction; **complex** (irregular blocks, special shields, compensators, wedges, molds or casts)
Radiation Treatment Delivery (Teletherapy)

a. Energy Level Technical Components

Radiation treatment delivery is the technical component of radiation therapy. It involves the activation and control of the therapeutic radioactive beam. Medicare established twelve (12) HCPCS/CPT codes to be used when reporting facility charges for radiation treatment delivery. Each code is specific to a level of energy, as well as to the complexity of the treatment.

These codes are:

- 77402 Radiation therapy delivery, single treatment area, single port or parallel opposed ports, simple blocks or no blocks; up to 5 MeV
- 77403 6-10 MeV
- 77404 11-19 MeV
- 77406 20 MeV or greater
- 77407 Radiation therapy delivery, two separate treatment areas, three or more ports on a single treatment area, used of multiple blocks; up to 5 MeV
- 77408 6-10 MeV
- 77409 11-19 MeV
- 77411 20 MeV or greater
- 77412 Radiation therapy delivery, three or more separate treatment ports, custom blocking, tangential ports, wedges, rotational beam, compensators, special particle beam (eg electron or neutrons); up to 5 MeV
- 77413 6-10 MeV
- 77414 11-19 MeV
- 77416 20 MeV or greater

In addition to the twelve energy level treatment delivery codes outlined above, HCPCS/CPT code 77401 is available to report superficial and/or ortho voltage treatment delivery. There is no professional component for this code either.

b. Coordinate with Treatment Level

Energy levels for treatment delivery are specified by treatment plans. When reporting HCPCS/CPT codes to charge for treatment delivery be certain the reported codes reflect the level of complexity. For example, a patient established as intermediate in complexity and receiving 18 MeV therapy would be charged for each therapeutic encounter using HCPCS/CPT code 77409.

c. Port Film Verification

Effective March 1, 1991 Medicare authorized a technical charge only for therapeutic radiology port films using 77417 and revenue code 333. This confirms that the therapeutic radioactive beam is being delivered correctly to the tumor being treated.
Radiation Treatment Management

Changes were made to this section in the 2000 CPT book. CPT codes 77419, 77420, 77425, and 74430 were deleted and replaced with:

77427 Radiation treatment management, five treatments

Radiation treatment management is reported in units of five fractions or treatment sessions, regardless of the actual time period in which the services are furnished. The services need not be furnished on consecutive days. Multiple fractions representing two or more treatment sessions furnished on the same day may be counted separately as long as there has been a distinct break in therapy sessions, and the fractions are of the character usually furnished on different days. Code 77427 is also reported if there are three or four fractions beyond a multiple of five at the end of a course of treatment; one or two fractions beyond a multiple of five art the end of a course of treatment are not reported separately. The professional services furnished during treatment management typically consist of:

- Review of port films
- Review of dosimetry, dose delivery, and treatment parameters;
- Review of patient treatment set-up;
- Examination of patient for medical evaluation and management (eg, assessment of the patient's response to treatment, coordination of care and treatment, review of imaging and/or lab test results).

HCPCS/CPT code 77431 is for reporting brief therapy management where the complete course of treatment consists of only one or two sessions. Do not use this code to report fractions from a final week of extended therapy.

Special Treatment Procedures

77470 is used to report special treatment procedure management that are not described elsewhere and which may be of a more complex nature than most. This code represents the physician’s effort and work necessary for the management of special procedures such as hyperfractionization, total body irradiation, vaginal core irradiation, brachytherapy, hyperthermia, combination with chemotherapy or other combined modality therapy, stereotactic radiosurgery, intra-operative radiation therapy, etc. Do not report this code more than one time per course of therapy to Medicare.

Be very specific when documenting radiation oncology services within the patient’s medical records for Medicare purposes. Failure to document specifically and legibly the planned course of therapy, type and delivery of treatment and the level of clinical management involved may result in denial of claims.

Proton Beam Treatment Delivery

There are four new and revised CPT codes (in 2001) to handle delivery. 77520, 77522, 77523 and 77525 distinguishing simple without compensation, simple with compensation, intermediate and complex respectfully.
Clinical Brachytherapy

Clinical brachytherapy requires the use of either natural or man-made radioelements applied into or around a treatment field of interest. The supervision of radioelements and dose interpretation is performed solely by the therapeutic radiologist.

Brachytherapy is often performed on patients who have been admitted as inpatients. The HCPCS/CPT code necessary to report the physicians’ services include services related to the hospital admission and the daily visit. Reporting an additional E & M code is inappropriate.

For the hospital, HCPCS/CPT codes are necessary only if the brachytherapy is being administered as an outpatient.

Coding for brachytherapy involves understanding which treatment modality a given course includes:

- 77750 Infusion or instillation of radioelement solution
- 77761 Intracavitary radiation source application; simple (A simple application has one to four sources/ribbons)
- 77762 intermediate (An intermediate application has five to ten sources/ribbons)
- 77763 complex (A complex application has greater than ten sources/ribbons)
- 77776 Interstitial radiation source application; simple
- 77777 intermediate
- 77778 complex

For patients for whom remote afterloading high intensity brachytherapy is needed:

- 77781 Remote afterloading high intensity brachytherapy: 1-4 source positions or catheters
- 77782 5-8 source positions or catheters
- 77783 9-12 source positions or catheters

And,

- 77789 Surface application of radiation source

Note that HCPCS/CPT code 77790 describes supervision, handling, loading of radiation source. Check with your carrier or fiscal intermediary to determine their payment policy for use of this code.
Field Setting

a. Computed Tomography

Whenever guidance for placement of radiation therapy fields is provided by computerized tomography, charge 76370.

b. Ultrasound Guidance

Whenever guidance for placement of radiation therapy fields is provided by ultrasound charge 76950.

Stereotactic Radiation Treatment Management of Cerebral Lesion(s)

The linear accelerator uses a highly collimated (very small diameter) pencil beam of x-ray from the accelerator but only a single beam. The machine has the capability of moving in various directions. All of these movements are carefully coordinated to allow the linear accelerator beam to remain focused on the area of tumor volume while distributing the entry points of the beam throughout a wide radius. This code (77432) will be charged only once each course of treatment of the cerebral lesion.

Guidelines for the use of the gamma knife or linear accelerator for stereotactic radiosurgery are as follows:

2. Small primary lesions of the brain (ICD-9 code 191.0-191.9).
3. As a boost for larger primary central nervous system lesions that have been treated initially with external beam radiation therapy (ICD-9 code 191.0--191.9).
4. Metastatic lesions in a patient who has documented evidence that the primary cancer and all other metastatic sites are under control. This must be a patient who has a reasonable life expectancy and is not a candidate for external beam radiation to the metastatic lesions of the brain (ICD-9 code 198.3).
5. Meningiomas (ICD-9 code 225.2).