<table>
<thead>
<tr>
<th>2011 PREFACE GUIDELINE NUMBER and TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE-1 GUIDELINE DEVELOPMENT         2</td>
</tr>
<tr>
<td>PREFACE-2 BENEFITS, COVERAGE POLICIES, ELIGIBILITY ISSUES 2</td>
</tr>
<tr>
<td>PREFACE-3 CLINICAL INFORMATION</td>
</tr>
<tr>
<td>3.1 Philosophy of MSI Guidelines        2</td>
</tr>
<tr>
<td>3.2 General Remarks                     3</td>
</tr>
<tr>
<td>PREFACE-4 CODING ISSUES</td>
</tr>
<tr>
<td>4.1 3D Rendering                        4</td>
</tr>
<tr>
<td>4.2 CT-, MR-, and Ultrasound Guided Procedures 4</td>
</tr>
<tr>
<td>4.3 CT or MR Unlisted Procedures        6</td>
</tr>
<tr>
<td>4.4 Unilateral versus Bilateral Breast MRI 7</td>
</tr>
<tr>
<td>4.5 CPT® 76380 Limited or Follow-up CT Scan 7</td>
</tr>
<tr>
<td>PREFACE-5 LIFESCAN or WHOLE BODY SCAN   7</td>
</tr>
<tr>
<td>PREFACE-6 REFERENCES                    8</td>
</tr>
<tr>
<td>PREFACE-7 COPYRIGHT INFORMATION         8</td>
</tr>
<tr>
<td>PREFACE-8 TRADEMARKS                    8</td>
</tr>
</tbody>
</table>
PREFACE-1 GUIDELINE DEVELOPMENT

- MedSolutions, Inc. (MSI) has developed and maintains evidence-based, proprietary clinical guidelines to evaluate CT, CTA, MRI, MRA, PET, bone mineral densitometry, ultrasound, and cardiac imaging studies.
- MedSolutions reserves the right to change and update the guidelines from time to time and conducts a formal review of the clinical guidelines once a year.
- MedSolutions’ guidelines are based upon the American College of Radiology (ACR) Appropriateness Criteria®, nationally accepted oncology guidelines, evidence-based clinical data to the extent available, consensus statements from specialty societies such as the American College of Cardiology, the American Heart Association, the American Academy of Neurology, the Institute for Clinical Systems Improvement, the American Academy of Orthopedic Surgeons, the American Congress of Obstetricians and Gynecologists (ACOG), and the Society for Maternal-Fetal Medicine, published literature in peer-reviewed journals, input from health plans, and input from practicing clinicians from academic institutions as well as community-based physicians.

PREFACE-2 BENEFITS, COVERAGE POLICIES, and ELIGIBILITY ISSUES

- Benefits, coverage policies, and eligibility issues pertaining to each Health Plan take precedence over MedSolutions’ guidelines.
- Medicare Coverage Policies
  - For Medicare and Medicare Advantage members, the coverage polices of CMS (Centers for Medicare and Medicaid Services) will take precedence over MedSolutions’ guidelines.
  - Exception: Payers may choose to adopt other evidence-based guidelines (such as MedSolutions’ guidelines) rather than using Local Coverage Determinations.
- Studies considered investigational and experimental
  - Certain imaging studies described in these guidelines are considered investigational by various payers, and their coverage policies will take precedence over MedSolutions’ guidelines.

PREFACE-3 CLINICAL INFORMATION

- Preface-3.1 Philosophy
  - The philosophy behind MSI guidelines is using an evidence-based approach to determine the most appropriate imaging procedure for each patient, at the most appropriate time in the diagnostic and treatment cycle. MSI guidelines are driven by the patient’s clinical presentation, not by the studies requested.
Thus, imaging studies should not be ordered prior to clinical evaluation of a patient, including a recent detailed history, physical examination, and appropriate laboratory studies.

A current history and physical examination are necessary for determining the medical necessity of advanced imaging requests.

The clinical information should describe how the requested imaging study(ies) will affect patient management or treatment decisions.

MedSolutions maintains that a sequential approach to obtaining imaging studies, that is, awaiting the results of initial tests or radiologic studies to rule in or out an entity on the differential diagnosis prior to obtaining further tests or radiologic studies, is generally the most appropriate approach to managing patients in the elective, outpatient setting.

The information provided to MedSolutions should have clinical relevance to the imaging study(ies) requested.

- If the information provided makes no reference to a potential indication for the requested imaging study(ies), then the medical necessity of the imaging study(ies) cannot be supported.

Advanced imaging of a particular body part is generally not indicated in the absence of recent clinical, laboratory, or imaging data suggesting an abnormality of that body part.

If CT scan is indicated, CT without contrast is appropriate if renal insufficiency or renal failure is present.

If, during the performance of a non-contrast imaging study, there is the need to use contrast in order to evaluate a possible abnormality, then that is appropriate.

Repeat advanced imaging study(ies) are generally not indicated in the absence of evidence of progression of disease, evidence of new onset of disease, or if there is insufficient information as to how repeat imaging will affect patient management or treatment decisions.

**Preface-3.2 General Remarks**

- The clinical guidelines for imaging are not intended to supersede or replace sound medical judgment, but instead, should facilitate the identification of the most appropriate imaging procedure given the patient’s clinical condition.

- These guidelines are written to cover medical conditions as experienced by the majority of patients. However, these guidelines may not be applicable in certain clinical circumstances, and physician judgment can override the guidelines.

- Clinical decisions, including treatment decisions, are the responsibility of the patient and his/her provider. Clinicians are expected to use independent medical judgment which takes into account the clinical circumstances to determine patient management decisions.
• PREFACE-4 CODING ISSUES
  o Preface-4.1 3D Rendering
    ➢ CPT®76376 and CPT®76377: Both of these codes share the following text in their definitions: “3D rendering with interpretation and reporting of computed tomography, magnetic resonance imaging, ultrasound or other tomographic modality.”
    ➢ These two codes differ in the need for and use of an independent workstation for post-processing.
      ▪ CPT®76376 is for procedures not requiring image post-processing on an independent workstation.
      ▪ CPT®76377 is for procedures that require image post-processing on an independent workstation.
    ➢ These 3D rendering codes should not be used for 2D reformatting.
      ▪ Two-dimensional reconstruction (e.g. reformatting an axial scan into the coronal plane) is now included in all cross-sectional imaging base codes and is not separately reimbursable.
    ➢ Some payers do not reimburse for CPT®76376 or CPT®76377. In addition, these CPT® codes are not included in every MSI client's radiology management program.
    ➢ CPT® codes for 3D rendering should not be billed in conjunction with computer-aided detection (CAD), MRA, CTA, nuclear medicine SPECT studies, PET, PET/CT, CT colonography (virtual colonoscopy), cardiac MRI, cardiac CT, or coronary CTA studies.
    ➢ In general, MedSolutions maintains that CPT®76376 (3D rendering not requiring image post-processing on an independent workstation) should not be separately reimbursed, since this function is built into the imaging software and generally takes less than 15 minutes to perform.
    ➢ The routine use of 3D and 4D rendering (post-processing) in conjunction with ultrasound is considered investigational.
    ➢ CPT®76377 (3D rendering requiring image post-processing on an independent workstation) can be considered in the following clinical scenarios (Requests will be sent for Medical Director review):
      ▪ Evaluation of congenital skull abnormalities in babies/toddlers (usually for preoperative planning).
      ▪ Complex joint fractures or pelvis fractures
      ▪ Spine fractures (usually for preoperative planning)
      ▪ Complex facial fractures
      ▪ Preoperative planning for other complex surgical cases
  o Preface-4.2 CT-, MR-, or Ultrasound-Guided Procedures
    ➢ CT, MR, and Ultrasound guidance procedure codes contain all the imaging necessary to guide a needle or catheter. It is inappropriate to routinely bill a diagnostic procedure code in conjunction with a guidance procedure code.
      ▪ For example, a diagnostic breast MRI code (CPT®77058 or CPT®77059) should be not be billed in conjunction with an MR guidance code CPT®77021) unless a separate diagnostic breast MRI
was ordered by the referring physician, medically necessary, and the findings are clearly documented on a separate radiology report (or in a separate section).

- Imaging studies performed as part of a CT-, MR-, or Ultrasound-guided procedure should be reported using the CPT® codes in the following table.
  - For example, MR-guided breast biopsy should be coded as CPT®77021 and not as CPT®77058 or CPT®77059

### TABLE: IMAGING GUIDANCE PROCEDURE CODES

<table>
<thead>
<tr>
<th>CPT®</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>75989</td>
<td>Imaging guidance for percutaneous drainage with placement of catheter (all imaging modalities)</td>
</tr>
<tr>
<td>77011</td>
<td>CT guidance for stereotactic localization</td>
</tr>
<tr>
<td>77012</td>
<td>CT guidance for needle placement</td>
</tr>
<tr>
<td>77013</td>
<td>CT guidance for, and monitoring of parenchymal tissue ablation</td>
</tr>
<tr>
<td>77021</td>
<td>MR guidance for needle placement</td>
</tr>
<tr>
<td>77022</td>
<td>MR guidance for, and monitoring of parenchymal tissue ablation</td>
</tr>
<tr>
<td>76942</td>
<td>Ultrasonic guidance for needle placement</td>
</tr>
</tbody>
</table>

- **CPT®75989**: This code is used to report imaging guidance for a percutaneous drainage procedure in which a catheter is left in place.
  - This code can be used whether the drainage catheter is placed under fluoroscopy, ultrasound, CT, or MR guidance modality.
- **CPT®77011**: A stereotactic CT localization scan is frequently obtained prior to sinus surgery. The dataset is then loaded into the navigational workstation in the operating room for use during the surgical procedure. The information provides exact positioning of surgical instruments with regard to the patient’s 3D CT images.
  - In most cases, the preoperative CT is a technical-only service that does not require interpretation by a radiologist.
    - The imaging facility should report CPT®77011 when performing a scan not requiring interpretation by a radiologist.
    - If a diagnostic scan is performed and interpreted by a radiologist, the appropriate diagnostic CT code (e.g., CPT®70486) should be used.
    - It is not appropriate to report both CPT®70486 and CPT®77011 for the same CT stereotactic localization imaging session.
    - 3D Rendering (CPT®76376 or CPT®76377) should not be reported in conjunction with CPT®77011 (or CPT®70486 if used). The procedure inherently generates a 3D dataset.
- **CPT®77012 (CT) and CPT®77021 (MR)** are used to report imaging guidance for needle placement during biopsy, aspiration, and other percutaneous procedures.
  - These codes represent the radiological supervision and interpretation of the procedure and are often billed in conjunction with surgical procedure codes.
For example, CPT®77012 is reported when CT guidance is used to place the needle for a conventional arthrogram.

- Only codes representing percutaneous surgical procedures should be billed with CPT®77012 and CPT®77021. It is inappropriate to use with surgical codes for open, excisional, or incisional procedures.

  - **CPT®77013 (CT) and CPT®77022 (MR)** include the initial guidance to direct a needle electrode to the tumor(s), monitoring for needle electrode repositioning within the lesion, and as necessary for multiple ablations to coagulate the lesion and confirmation of satisfactory coagulative necrosis of the lesion(s) and comparison to pre-ablation images.
    - **NOTE:** CPT®77013 should only be used for non-bone ablation procedures.
    - CPT®20982 includes CT guidance for bone tumor ablations.
    - Only codes representing percutaneous surgical procedures should be billed with CPT®77013 and CPT®77022. It is inappropriate to use with surgical codes for open, excisional, or incisional procedures.

  - CPT®77012 and CPT®77021 (as well as guidance codes CPT®76942 [US], and CPT®77002- CPT®77003 [fluoroscopy]) describe radiologic guidance by different modalities.
    - Only one unit of any of these codes should be reported per patient encounter (date of service).
    - The unit of service is considered to be the patient encounter, not the number of lesions, aspirations, biopsies, injections, or localizations.

**o Preface-4.3 CT or MR Unlisted Procedures/Therapy Treatment Planning**

<table>
<thead>
<tr>
<th>CPT®</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>76497</td>
<td>Unlisted CT procedure (e.g., diagnostic or interventional)</td>
</tr>
<tr>
<td>76498</td>
<td>Unlisted MR procedure (e.g., diagnostic or interventional)</td>
</tr>
<tr>
<td>78999</td>
<td>Unlisted procedure, diagnostic nuclear medicine</td>
</tr>
</tbody>
</table>

- These unlisted codes should be reported whenever a diagnostic or interventional CT or MR study is performed in which an appropriate anatomic site-specific code is not available.
- A Category III code that describes the procedure performed must be reported rather than an unlisted code if one is available.
- All requests for studies billed with these unlisted codes will be sent for Medical Director review:
- Requests must be accompanied by detailed notes describing the procedure and the medical necessity indications for the study.

**Therapy Treatment Planning**

- **Radiation Therapy Treatment Planning:**
  - Imaging performed in support of radiation therapy treatment planning should be reported with the corresponding therapeutic codes (CPT®77014 for CT scans, CPT®76498 for MRI scans,
CPT®78999 for PET scans), not with diagnostic imaging codes.

- PET scans are being used for radiation therapy treatment planning, but should be coded as CPT®78999 (unlisted procedure, diagnostic nuclear medicine) and NOT as diagnostic PET scans (CPT®78812, CPT®78815, or CPT®78816)

- CPT®78999 does not require prior authorization by MedSolutions

- **Stereotactic Radiosurgery:**
  - Quantitative volumetric brain scans for stereotactic radiosurgery should be reported with CPT®76498

- **Preface-4.4 Unilateral versus Bilateral Breast MRI**
  - Diagnostic MRI of both breasts should be coded as CPT®77059 regardless of whether both breasts are imaged simultaneously or whether unilateral breast MRI is performed in two separate imaging sessions.

- **Preface-4.5 CPT®76380 Limited or Follow-up CT Scan**
  - CPT®76380 describes a limited or follow-up CT scan.
    - The code is used to report any CT scan, for any given area of the body, in which the work of a full diagnostic code is not performed.
    - Common examples include (but are not limited to):
      - Limited sinus CT imaging protocol
      - Limited or follow-up slices through a known pulmonary nodule
      - Limited slices to assess a non-healing fracture (such as the clavicle)
    - The reporting of CPT®76380, in conjunction with other diagnostic CT codes, to cover ‘extra slices’ in certain imaging protocols is inappropriate.
    - There is no specific number of sequences or slices defined in any CT CPT® code definition.
    - The AMA, in CPT® 2011, does not describe nor assign any minimum or maximum number of sequences or slices for any CT study.
      - A few additional slices or sequences are not uncommon.
      - CT imaging protocols are often influenced by the individual clinical situation of the patient. Sometimes the protocols require more time and sometimes less.

- **PREFACE-5 LIFESCAN or WHOLE BODY SCAN**
  - Life scan or whole body CT or MRI for screening of asymptomatic patients is not a covered benefit of any of the current health plans who have delegated utilization review to MedSolutions.
  - The performance of screening CT examinations in healthy patients does not meet any of the current validity criteria for screening studies and there is no clear documentation of benefit versus radiation risk.
• **PREFACE-6 REFERENCES**
  o References are embedded within the body of the guidelines.
  o Complete reference citations for the journal articles can be found on the Reference page at the end of each guideline section.
  o The website addresses for certain references are included in the body of the guidelines but are not hyperlinked to the actual website.
  o The website address for the American College of Radiology (ACR) Appropriateness Criteria® is http://www.acr.org
  Click on Quality & Safety Resources then click on ACR Appropriateness Criteria®.

• **PREFACE-7 COPYRIGHT INFORMATION**
  o ©2011 MedSolutions, Inc. All rights reserved. No part of these materials may be changed, reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, or in any information storage or retrieval system, without the prior express written permission of MedSolutions, Inc.

• **PREFACE-8 TRADEMARKS**
  o CPT® (Current Procedural Terminology) is a registered trademark of the American Medical Association (AMA).
  o CPT® five digit codes, nomenclature and other data are copyright 2011 American Medical Association. All Rights Reserved.
  o No fee schedules, basic units, relative values or related listings are included in the CPT® book.
  o AMA does not directly or indirectly practice medicine or dispense medical services. AMA assumes no liability for the data contained herein or not contained herein.