# Coverage Summary

## Cardiovascular Diagnostic Procedures

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved by:</td>
<td>UnitedHealthcare Medicare Benefit Interpretation Committee</td>
<td>Last Review Date: 09/17/2019</td>
</tr>
</tbody>
</table>

### Related Medicare Advantage Policy Guidelines:

- Ambulatory Blood Pressure Monitoring (NCD 20.19)
- Biomarkers in Cardiovascular Risk Assessment
- Cardiac Output Monitoring by Thoracic Electrical Bioimpedance (TEB) (NCD 20.16)
- Cardiointegram (CIG) as an Alternative to Stress Test or Thallium Stress Test (NCD 20.27)
- Digital Subtraction Angiography (NCD 220.9)
- Displacement Cardiography (NCD 20.24)
- Electrocardiographic Services (NCD 20.15)
- External Electrocardiographic Recording
- Microvolt T-Wave Alternans (MTWA) (NCD 20.30)
- Noninvasive Tests of Carotid Function (NCD 20.17)
- Percutaneous Coronary Interventions
- Plethysmography (NCD 20.14)

---

I. **COVERAGE**

1. Diagnostic Endocardial Electrical Stimulation (EES)
2. Digital Subtraction Angiography (DSA)
3. Digoxin Therapeutic Drug Assay
4. Electrocardiographic (EKG) Services
5. HIS Bundle Study
6. Cardiac Catheterization Performed Other Than a Hospital Setting
7. Thoracic Electrical Bioimpedance (TEB)
8. Displacement Cardiography (including Cardiokymography and Photokymography)
9. Cardiointegram (CIG)
10. Ambulatory Blood Pressure Monitoring
11. Non-invasive Test of Carotid Function (Direct and Indirect)
12. Plethysmography
13. Microvolt T-wave Alternans
14. Intravascular Coronary Ultrasound
15. Arterial Compliance Testing, Using Waveform Analysis (CPT code 93050)
I. COVERAGE

Coverage Statement: Cardiovascular diagnostic procedures are covered when Medicare coverage criteria are met.

Guidelines/Notes:
The following is not an all inclusive list of cardiac diagnostic procedures, but reflects diagnostic procedures based on the National Coverage Determinations (NCDs) listed below.

1. **Diagnostic Endocardial Electrical Stimulation (EES)**
   Diagnostic endocardial electrical stimulation is covered when criteria are met. See the NCD for Diagnostic Endocardial Electrical Stimulation (Pacing) (20.12). (Accessed January 3, 2019)

2. **Digital Subtraction Angiography (DSA)**
   Digital subtraction angiography is covered the same as conventional angiography. Payment for DSA should not exceed, and may be less than, that being paid for conventional angiographic techniques. See the NCD for Digital Subtraction Angiography (220.9). (Accessed January 3, 2019)

3. **Digoxin Therapeutic Drug Assay**
   Digoxin therapeutic drug assay is covered. For specific indications, see the NCD for Digoxin Therapeutic Drug Assay (190.24). (Accessed January 3, 2019)

4. **Electrocardiographic (EKG) Services**
   EKG services, including Electrocardiogram Ambulatory Electrocardiography (AECG) (Holter monitor or Real-time EKG), Cardiac Event Monitor or Event Recorders are covered when specific criteria are met. See the NCD for Electrocardiographic Services (20.15). (Accessed January 3, 2019)

   Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx. (Accessed August 1, 2019)

5. **HIS Bundle Study**
   HIS Bundle Study is covered for selected patients. For specific indications, see the NCD for HIS Bundle Study (20.13). (Accessed January 3, 2019)

6. **Cardiac Catheterization Performed Other than a Hospital Setting**
   Cardiac catheterization performed other than a hospital setting is a covered service. The procedure may also be covered when performed in a freestanding clinic when the carrier, in consultation with the appropriate Peer Review Organization (PRO), determines that the procedure can be performed safely in all respects in the particular facility.

   In the absence of an NCD, local Medicare Contractors, UnitedHealthcare Medicare Advantage can determine whether a cardiac catheterization performed in a freestanding facility is reasonable and necessary.
See the Decision Memo for Cardiac Catheterization Performed In Other Than A Hospital Setting (CAG-00166N). (Accessed January 3, 2019)

Note: CMS repealed the NCD for Cardiac Catheterization Performed in Other than a Hospital Setting (20.25) effective January 12, 2006. (Accessed January 3, 2019)

7. Thoracic Electrical Bioimpedance (TEB)
TEB devices are covered when specific patient criteria are met. See the NCD for Cardiac Output Monitoring by Thoracic Electrical Bioimpedance (20.16). (Accessed January 3, 2019)

8. Displacement Cardiography (including Cardiokymography and Photokymography)
Displacement cardiography, including cardiokymography and photokymography, is a non-invasive diagnostic test used in evaluating coronary artery disease.
   a) Cardiokymography is a covered service only when it is used as an adjunct to electrocardiographic stress testing in evaluating coronary artery disease and only when the following clinical indications are present:
      o For male patients, atypical angina pectoris or non-ischemic chest pain; or
      o For female patients, angina, either typical or atypical
   b) Photokymography is not covered. See the NCD for Displacement Cardiography (20.24). (Accessed January 3, 2019)

Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx. (Accessed January 3, 2019)

9. Cardiointegram (CIG)
Cardiointegram (CIG) is not a covered benefit as it is considered by Medicare as investigational. See the NCD for Cardiointegram (CIG) as an Alternative to Stress Test or Thallium Stress Test (20.27). (Accessed January 3, 2019)

10. Ambulatory Blood Pressure Monitoring
Ambulatory blood pressure monitoring is covered when criteria are met. See the NCD for Ambulatory Blood Pressure Monitoring (20.19). (Accessed January 3, 2019)

Also see the Coverage Summary for Durable Medical Equipment (DME), Prosthetics, Corrective Appliances/Orthotics (Non-Foot Orthotics) and Medical Supplies Grid.

11. Non-invasive Test of Carotid Function (Direct and Indirect)
Refer to the Coverage Summary for Carotid Procedures and Testing.

12. Plethysmography
Plethysmography is covered when Category I tests criteria are met. Category II tests are considered experimental and therefore, not covered. See the NCD for Plethysmography (20.14). (Accessed January 3, 2019)

Local Coverage Determinations (LCDs)/Local Coverage Articles (LCAs) exist and compliance with these policies is required where applicable. These LCDs/LCAs are available at http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx. (Accessed September 11, 2019)

13. Microvolt T-wave Alternans
Microvolt T-wave Alternans diagnostic testing is covered for the evaluation of patients at risk for SCD, only when the spectral analysis method is used.
Microvolt T-wave Alternans diagnostic testing is not covered for the evaluation of patients at risk for SCD if measurement is not performed employing the spectral analysis.

See the NCD for Microvolt T-Wave Alternans (20.30). (Accessed January 3, 2019)

**NCD Update:** On January 13, 2015, Centers for Medicare & Medicaid Services has decided that no National Coverage Determination (NCD) is appropriate at this time for microvolt T-wave alternans (MTWA) testing using the modified moving average (MMA) method for the evaluation of patients at risk for sudden cardiac death (SCD). National non-coverage will be removed. Medicare coverage of MTWA using the MMA method will be determined by the local contractors. The CMS final decision memo pertaining to this update is available at http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=275. (Accessed January 3, 2019)

14. **Intravascular Coronary Ultrasound (CPT codes 92978 and 92979)**
   - Medicare does not have a National Coverage Determination (NCD) for intravascular coronary ultrasound.
   - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist for all 50 states and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, refer to the LCD Availability Grid (Attachment A).
   - Committee approval date: August 20, 2019
   - Accessed November 17, 2019

15. **Arterial Compliance Testing, Using Waveform Analysis (CPT code 93050)**
   - Medicare does not have a National Coverage Determination (NCD) for arterial compliance testing, using waveform analysis.
   - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, refer to the LCD Availability Grid (Attachment B).
   - For states with no LCDs/LCAs, see the UnitedHealthcare Commercial Medical Policy for Cardiovascular Disease Risk Tests for coverage guidelines.
     (IMPORTANT NOTE: After checking the LCD Availability Grid and searching the Medicare Coverage Database, if no state LCD/LCA is found, then use the above referenced policy.)
   - Committee approval date: January 15, 2019
   - Accessed November 17, 2019

16. **Lower Extremity Vascular Angiography (CPT codes 75710 and 75716)**
   - Medicare does not have a National Coverage Determination (NCD) for lower extremity vascular angiography.
   - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and compliance with these policies is required where applicable. For state-specific LCDs/LCAs, refer to the LCD Availability Grid (Attachment C).
   - For states with no LCDs/LCAs, see the UnitedHealthcare Commercial Medical Policy for Lower Extremity Vascular Angiography for coverage guidelines.
     (IMPORTANT NOTE: After checking the LCD Availability Grid and searching the Medicare Coverage Database, if no state LCD/LCA is found, then use the above referenced policy.)
   - Committee approval date: September 17, 2019
   - Accessed November 17, 2019
II. DEFINITIONS

**Diagnostic Services:** A service is "diagnostic" if it is an examination or procedure to which the patient is subjected, or which is performed on materials derived from a hospital outpatient, to obtain information to aid in the assessment of a medical condition or the identification of a disease. Among these examinations and tests are diagnostic laboratory services such as hematology and chemistry, diagnostic x-rays, isotope studies, EKGs, pulmonary function studies, thyroid function tests, psychological tests, and other tests given to determine the nature and severity of an ailment or injury. See the Medicare Benefit Policy Manual, Chapter 6, §20.4.1-Diagnostic Services Defined. (Accessed January 3, 2019)

III. REFERENCES

See above

IV. REVISION HISTORY

09/17/2019  Guideline 16 [Lower Extremity Vascular Angiography (CPT codes 75710 and 75716)] (new to policy)

- Added coverage guidelines to indicate:
  - Medicare does not have a National Coverage Determination (NCD) for lower extremity vascular angiography
  - Local Coverage Determinations (LCDs)/Local Coverage Article (LCAs) exist and compliance with these policies is required where applicable
    - For state-specific LCDs/LCAs, see Attachment C: LCD Availability Grid for Lower Extremity Vascular Angiography (CPT codes 75710 and 75716)
    - For states with no LCDs/LCAs, see the UnitedHealthcare Commercial Medical Policy titled Lower Extremity Vascular Angiography for applicable coverage guidelines

Attachments

- Added Attachment C: LCD Availability Grid for Lower Extremity Vascular Angiography (CPT codes 75710 and 75716)

V. ATTACHMENTS

Attachment A - LCD Availability Grid

**Intravascular Coronary Ultrasound**

(CPT codes 92978 and 92979)

CMS website accessed November 17, 2019

<table>
<thead>
<tr>
<th>LCD ID</th>
<th>LCD Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L34761</td>
<td>Percutaneous Coronary Interventions</td>
<td>MAC - Part A</td>
<td>Wisconsin Physicians Service Insurance Corporation</td>
<td>AK, AL, AR, AZ, CA, CO, CT, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY</td>
</tr>
<tr>
<td>A57479</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L34761</td>
<td>Percutaneous Coronary Interventions</td>
<td>MAC - Part A and B</td>
<td>Wisconsin Physicians Service Insurance Corporation</td>
<td>IA, IN, KS, MI, MO, NE</td>
</tr>
<tr>
<td>A57479</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Attachment A - LCD Availability Grid

**Intravascular Coronary Ultrasound**  
(CPT codes 92978 and 92979)  
CMS website accessed November 17, 2019

<table>
<thead>
<tr>
<th>LCD ID</th>
<th>LCD Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L33623 (A56823)</td>
<td><strong>Percutaneous Coronary Intervention</strong></td>
<td>A and B MAC</td>
<td>National Government Services, Inc.</td>
<td>IL, MN, CT, MA, ME, NH, NY, RI, VT, WI</td>
</tr>
<tr>
<td>L33557 (A52850)</td>
<td><strong>Cardiac Catheterization and Coronary Angiography</strong></td>
<td>A and B MAC</td>
<td>National Government Services, Inc.</td>
<td>IL, MN, CT, MA, ME, NH, NY, RI, VT, WI</td>
</tr>
<tr>
<td>L33959 (A56500)</td>
<td><strong>Cardiac Catheterization and Coronary Angiography</strong></td>
<td>A and B MAC</td>
<td>CGS Administrators, LLC</td>
<td>KY, OH</td>
</tr>
</tbody>
</table>

---

### Attachment B - LCD Availability Grid

**Arterial Compliance Testing, Using Waveform Analysis**  
(CPT code 93050)  
CMS website accessed November 17, 2019

<table>
<thead>
<tr>
<th>LCD ID</th>
<th>LCD Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L36219 (A55607)</td>
<td><strong>Non-Covered Services</strong></td>
<td>A and B MAC</td>
<td>Noridian Healthcare Solutions, LLC</td>
<td>CA, HI, NV, AS, GU, MP</td>
</tr>
<tr>
<td>L35008 (A55681)</td>
<td><strong>Non-Covered Services</strong></td>
<td>A and B MAC</td>
<td>Noridian Healthcare Solutions, LLC</td>
<td>AK, AZ, ID, MT, ND, OR, SD, WA, UT, WY</td>
</tr>
<tr>
<td>L33777 (A54675)</td>
<td><strong>Non-covered Services</strong></td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc.</td>
<td>FL, PR , VI</td>
</tr>
<tr>
<td>L35094 (A56967)</td>
<td><strong>Services That Are Not Reasonable and Necessary</strong></td>
<td>A and B MAC</td>
<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX</td>
</tr>
</tbody>
</table>

---

### Attachment C - LCD Availability Grid

**Lower Extremity Vascular Angiography**  
(CPT codes 75710 and 75716)  
CMS website accessed November 17, 2019

<table>
<thead>
<tr>
<th>LCD ID</th>
<th>LCD Title</th>
<th>Contractor Type</th>
<th>Contractor</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>L35092 (A56682)</td>
<td><strong>Diagnostic Abdominal Aortography and Renal Angiography</strong></td>
<td>A and B MAC</td>
<td>Novitas Solutions, Inc.</td>
<td>AR, CO, DC, DE, LA, MD, MS, NJ, NM, OK, PA, TX</td>
</tr>
<tr>
<td>L36767 (A57056)</td>
<td><strong>Aortography and peripheral angiography</strong></td>
<td>A and B MAC</td>
<td>First Coast Service Options, Inc.</td>
<td>FL, PR , VI</td>
</tr>
</tbody>
</table>

---

**End of Attachment C**