2017 CODING AND REIMBURSEMENT CONSIDERATIONS FOR

Cardiac Surgical Ablation

AtriCure
2017 Coding and Reimbursement Considerations

Introduction
This information is shared for educational purposes and current as of January 2017. Healthcare providers are solely responsible for the accuracy of codes selected for the services rendered and reported in the patient’s medical record. AtriCure does not assume responsibility for coding decisions, nor recommend codes for specific cases. Items and services that are billed to payers must be medically necessary and supported by appropriate documentation. AtriCure does not promote the off-label use of its devices. While a code may exist describing certain procedures and/or technologies, this does not guarantee payment by payers.

Product Offerings:
AtriCure product offering includes: Bipolar Radiofrequency (RF) and Cryoablation surgical ablation devices; the AtriClip® Left Atrial Appendage Management System (LAAM); and cryoICE® Cryoanalgesia. These therapies are indicated as part of surgical treatment with either coronary artery bypass graft surgery (CABG), mitral valve replacement (MVR), aortic valve replacement (AVR), or in combination with an epicardial ablation procedure.

Table 1. Physician Coding and Reimbursement
Current Procedure Terminology (CPT®) are codes describing the procedure during the patient visit. CPT codes that may be appropriate for procedures used in conjunction with cardiac ablation surgery and LAAM include, but are not limited to:

<table>
<thead>
<tr>
<th>CPT*</th>
<th>Description</th>
<th>CY 2017 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2017 National Payment Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>33250</td>
<td>Operative ablation of supraventricular arrhythmogenic focus or pathway without cardiopulmonary bypass</td>
<td>42.14</td>
<td>$1,512.35</td>
</tr>
<tr>
<td>33251</td>
<td>Operative ablation of supraventricular arrhythmogenic focus or pathway with cardiopulmonary bypass</td>
<td>47.11</td>
<td>$1,690.72</td>
</tr>
<tr>
<td>33254</td>
<td>Operative tissue ablation and reconstruction of atria, limited (e.g., modified Maze procedure)</td>
<td>39.59</td>
<td>$1,420.83</td>
</tr>
<tr>
<td>33255</td>
<td>Operative tissue ablation and reconstruction of atria, extensive (e.g., Maze procedure); without cardiopulmonary bypass</td>
<td>47.68</td>
<td>$1,711.17</td>
</tr>
<tr>
<td>33256</td>
<td>Operative tissue ablation and reconstruction of atria, extensive (e.g., Maze procedure); with cardiopulmonary bypass</td>
<td>56.39</td>
<td>$2,023.76</td>
</tr>
<tr>
<td>33257</td>
<td>Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), limited (e.g., modified Maze procedure)</td>
<td>16.87</td>
<td>$606.54</td>
</tr>
<tr>
<td>33258</td>
<td>Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (e.g., Maze procedure); without cardiopulmonary bypass</td>
<td>18.96</td>
<td>$680.45</td>
</tr>
<tr>
<td>33259</td>
<td>Operative tissue ablation and reconstruction of atria, performed at the time of other cardiac procedure(s), extensive (e.g., Maze procedure), with cardiopulmonary bypass</td>
<td>24.48</td>
<td>$878.56</td>
</tr>
<tr>
<td>33261</td>
<td>Operative ablation of ventricular arrhythmogenic focus with cardiopulmonary bypass</td>
<td>47.10</td>
<td>$1,690.36</td>
</tr>
<tr>
<td>33265</td>
<td>Endoscopy, surgical; operative tissue ablation and reconstruction of atria, limited (e.g., modified Maze procedure), without cardiopulmonary bypass</td>
<td>39.38</td>
<td>$1,413.30</td>
</tr>
<tr>
<td>33266</td>
<td>Endoscopy, surgical; operative tissue ablation and reconstruction of atria, extensive (e.g., Maze procedure), without cardiopulmonary bypass</td>
<td>53.57</td>
<td>$1,922.56</td>
</tr>
</tbody>
</table>

CPT® is a registered trademark of the American Medical Association

Table 1. Physician Coding and Reimbursement continued on next page
**2017 Coding and Reimbursement Considerations**

Table 1. Physician Coding and Reimbursement  
*continued*

<table>
<thead>
<tr>
<th>CPT*</th>
<th>Description</th>
<th>CY 2017 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2017 National Payment Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mitral Valve Surgery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33420</td>
<td>Valvotomy (Commissurotomy), mitral valve; closed heart</td>
<td>42.40</td>
<td>$1,521.68</td>
</tr>
<tr>
<td>33422</td>
<td>Valvotomy (Commissurotomy), mitral valve; open heart, with cardiopulmonary bypass</td>
<td>48.49</td>
<td>$1,740.24</td>
</tr>
<tr>
<td>33425</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass</td>
<td>79.27</td>
<td>$2,844.90</td>
</tr>
<tr>
<td>33426</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass; with prosthetic ring</td>
<td>69.13</td>
<td>$2,480.99</td>
</tr>
<tr>
<td>33427</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass; radical reconstruction, with or without ring</td>
<td>70.99</td>
<td>$2,547.74</td>
</tr>
<tr>
<td>33430</td>
<td>Replacement, mitral valve, with cardiopulmonary bypass</td>
<td>81.20</td>
<td>$2,914.16</td>
</tr>
<tr>
<td><strong>Aortic Valve Surgery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33390</td>
<td>Valvuloplasty, aortic valve, open, with cardiopulmonary bypass; simple (i.e., valvotomy, debridement, debulking, and/or simple commissural resuspension)</td>
<td>55.37</td>
<td>$1,987.16</td>
</tr>
<tr>
<td>33391</td>
<td>Valvuloplasty, aortic valve, open, with cardiopulmonary bypass; complex (i.e., leaflet extension, leaflet resection, leaflet reconstruction, or annuloplasty)</td>
<td>65.61</td>
<td>$2,354.66</td>
</tr>
<tr>
<td>33404</td>
<td>Construction of apical-aortic conduit</td>
<td>50.92</td>
<td>$1,827.45</td>
</tr>
<tr>
<td>33405</td>
<td>Replacement, aortic valve, open, with cardiopulmonary bypass; with prosthetic valve other than homograft or stentless valve</td>
<td>65.85</td>
<td>$2,363.27</td>
</tr>
<tr>
<td>33406</td>
<td>Replacement, aortic valve, with cardiopulmonary bypass; with allograft valve (freehand)</td>
<td>83.45</td>
<td>$2,998.14</td>
</tr>
<tr>
<td>33410</td>
<td>Replacement, aortic valve, with cardiopulmonary bypass; with stentless tissue valve</td>
<td>73.82</td>
<td>$2,649.30</td>
</tr>
<tr>
<td>33411</td>
<td>Replacement, aortic valve; with aortic annulus enlargement, noncoronary sinus</td>
<td>97.43</td>
<td>$3,496.64</td>
</tr>
<tr>
<td>33412</td>
<td>Replacement, aortic valve; with transventricular aortic annulus enlargement (Konno procedure)</td>
<td>92.11</td>
<td>$3,305.71</td>
</tr>
<tr>
<td>33413</td>
<td>Replacement, aortic valve; by translocation of autologous pulmonary valve with allograft replacement of pulmonary valve (Ross procedure)</td>
<td>94.28</td>
<td>$3,383.59</td>
</tr>
<tr>
<td><strong>CABG</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33533</td>
<td>Coronary artery bypass, using arterial graft(s); single arterial graft</td>
<td>54.22</td>
<td>$1,945.89</td>
</tr>
<tr>
<td>33534</td>
<td>Coronary artery bypass, using arterial graft(s); 2 arterial grafts</td>
<td>63.80</td>
<td>$2,289.70</td>
</tr>
<tr>
<td>33535</td>
<td>Coronary artery bypass, using arterial graft(s); 3 arterial grafts</td>
<td>71.22</td>
<td>$2,555.99</td>
</tr>
<tr>
<td>33536</td>
<td>Coronary artery bypass, using arterial graft(s); 4 or more arterial grafts</td>
<td>76.77</td>
<td>$2,755.18</td>
</tr>
<tr>
<td>33542</td>
<td>Myocardial resection (e.g., ventricular aneurysmectomy)</td>
<td>76.18</td>
<td>$2,734.00</td>
</tr>
<tr>
<td>33545</td>
<td>Repair of postinfarction ventricular septal defect, with or without myocardial resection</td>
<td>89.92</td>
<td>$3,227.11</td>
</tr>
<tr>
<td>33548</td>
<td>Surgical ventricular restoration procedure, includes prosthetic patch, when performed (e.g., ventricular remodeling, SVR, SAVER, DOR procedure)</td>
<td>86.10</td>
<td>$3,090.02</td>
</tr>
</tbody>
</table>
### Table 1. Physician Coding and Reimbursement continued

<table>
<thead>
<tr>
<th>CPT*</th>
<th>Description</th>
<th>CY 2017 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2017 National Payment Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Electrophysiology Cardiac Ablation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>93653</td>
<td>Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), His bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atrial re-entry</td>
<td>24.35</td>
<td>$873.89</td>
</tr>
<tr>
<td>93655</td>
<td>Intracardiac catheter ablation of a discrete mechanism of arrhythmia which is distinct from the primary ablated mechanism, including repeat diagnostic maneuvers, to treat a spontaneous or induced arrhythmia</td>
<td>12.41</td>
<td>$445.38</td>
</tr>
<tr>
<td>93656</td>
<td>Comprehensive electrophysiologic evaluation including transseptal catheterizations, insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia including left or right atrial pacing/recording when necessary, right ventricular pacing/recording when necessary, and His bundle recording when necessary with intracardiac catheter ablation of atrial fibrillation by pulmonary vein isolation</td>
<td>32.72</td>
<td>$1,174.28</td>
</tr>
<tr>
<td>93657</td>
<td>Additional linear or focal intracardiac catheter ablation of the left or right atrium for treatment of atrial fibrillation remaining after completion of pulmonary vein isolation</td>
<td>12.38</td>
<td>$444.30</td>
</tr>
</tbody>
</table>

** The facility payment is the physician's professional fee in a facility setting. Average national rates are unadjusted by Geography Practice Cost Index. Payment rates reflect a conversion factor of $35.8887 (effective first quarter 2017).
### Table 2. Inpatient Facility Coding and Reimbursement

The site of service depends on the patient’s chief complaint, clinical presentation and is solely determined by the admitting physician. The ICD-10-CM (Internal Classification of Disease, Tenth Revision, Clinical Modification) Diagnosis Code(s) and primary ICD-10-CM procedure code(s) determine the MS-DRG (Medicare Severity Diagnosis Related Group).

<table>
<thead>
<tr>
<th>MS-DRG*</th>
<th>Description</th>
<th>Weight</th>
<th>Arithmetic mean LOS</th>
<th>CY 2017 Inpatient National Standardized Prospective Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Cardiac Surgical Ablation</strong>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>228</td>
<td>Other cardiothoracic procedures with MCC</td>
<td>7.0869</td>
<td>11.4</td>
<td>$39,092.33</td>
</tr>
<tr>
<td>229</td>
<td>Other cardiothoracic procedures without MCC</td>
<td>4.7459</td>
<td>5.5</td>
<td>$26,179.05</td>
</tr>
<tr>
<td></td>
<td><strong>Aortic and Mitral Valves</strong>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>216</td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization with MCC</td>
<td>9.6640</td>
<td>15.1</td>
<td>$53,307.98</td>
</tr>
<tr>
<td>217</td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization with CC</td>
<td>6.3198</td>
<td>9.4</td>
<td>$34,860.90</td>
</tr>
<tr>
<td>218</td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization without CC/MCC</td>
<td>5.6679</td>
<td>6.6</td>
<td>$31,264.93</td>
</tr>
<tr>
<td>219</td>
<td>Cardiac valve and other major cardiothoracic procedures w/o cardiac catheterization with MCC</td>
<td>7.7112</td>
<td>11.5</td>
<td>$42,536.06</td>
</tr>
<tr>
<td>220</td>
<td>Cardiac valve and other major cardiothoracic procedures w/o cardiac catheterization with CC</td>
<td>5.1554</td>
<td>7.0</td>
<td>$28,437.91</td>
</tr>
<tr>
<td>221</td>
<td>Cardiac valve and other major cardiothoracic procedures w/o cardiac catheterization w/o CC/MCC</td>
<td>4.6105</td>
<td>5.2</td>
<td>$25,432.16</td>
</tr>
<tr>
<td></td>
<td><strong>CABG</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>231</td>
<td>Coronary bypass with PTCA with MCC</td>
<td>8.0662</td>
<td>12.3</td>
<td>$44,494.29</td>
</tr>
<tr>
<td>232</td>
<td>Coronary bypass with PTCA w/o MCC</td>
<td>5.8847</td>
<td>8.1</td>
<td>$32,460.83</td>
</tr>
<tr>
<td>233</td>
<td>Coronary bypass with cardiac catheterization with MCC</td>
<td>7.4876</td>
<td>11.7</td>
<td>$41,302.65</td>
</tr>
<tr>
<td>234</td>
<td>Coronary bypass with cardiac catheterization w/o MCC</td>
<td>4.9523</td>
<td>8.0</td>
<td>$27,317.58</td>
</tr>
<tr>
<td>235</td>
<td>Coronary bypass with w/o cardiac catheterization with MCC</td>
<td>5.7644</td>
<td>9.0</td>
<td>$31,797.24</td>
</tr>
<tr>
<td>236</td>
<td>Coronary bypass with w/o cardiac catheterization w/o MCC</td>
<td>3.8520</td>
<td>6.1</td>
<td>$21,248.17</td>
</tr>
</tbody>
</table>

CC = comorbidity or complication, MCC = major complication or comorbidity, w/o = without, PTCA = percutaneous transluminal coronary angioplasty.


**There are no separate MS-DRG payments for the use of the AtriClip LAAM in concomitant surgery, nor for the use of cryoICE Cryoanalgesia.
Table 3. Outpatient Hospital and Ambulatory Surgery Center Reimbursement

When a percutaneous ablation procedure is performed, the corresponding APC (ambulatory payment classification, similar to DRG for inpatient), for inpatient outpatient prospective payment system (HOPPS) may include:

<table>
<thead>
<tr>
<th>CPT</th>
<th>Definition</th>
<th>APC</th>
<th>Title</th>
<th>CY 2017 Medicare National Standardized APC Payment (HOPPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>93653</td>
<td>Comprehensive electrophysiologic evaluation including insertion and repositioning of multiple electrode catheters with induction or attempted induction of an arrhythmia with right atrial pacing and recording, right ventricular pacing and recording (when necessary), and His bundle recording (when necessary) with intracardiac catheter ablation of arrhythmogenic focus; with treatment of supraventricular tachycardia by ablation of fast or slow atrioventricular pathway, accessory atrioventricular connection, cavo-tricuspid isthmus or other single atrial focus or source of atria re-entry</td>
<td>5213</td>
<td>Level 3 EP Procedure</td>
<td>$16,778.15</td>
</tr>
<tr>
<td>93656</td>
<td>Additional linear or focal intracardiac catheter ablation of the left or right atrium for treatment of atrial fibrillation remaining after completion of pulmonary vein isolation</td>
<td>5213</td>
<td>Level 3 EP Procedure</td>
<td>$16,778.15</td>
</tr>
</tbody>
</table>


**Peer-Reviewed Evidence**

Clinical evidence in support of surgical cardiac ablation and left atrial appendage surgical closure, includes, but is not limited to, the following peer-reviewed publications. Citations are available upon request.

**Cardiac surgical ablation with/without concomitant cardiac surgery (CABG, MVR, AVR)**

**Concomitant cardiac surgery with either (CABG, MVR, AVR) and surgical left atrial appendage management**

For further information please call AtriCure’s Reimbursement Hotline at 1-888-347-6403, extension 5338.