2018 CODING AND REIMBURSEMENT FOR
Cardiac Surgical Ablation and
Left Atrial Appendage Management

AtriCure
# 2018 Coding and Reimbursement Considerations

## Introduction
This information is shared for educational purposes and current as of January 2018. 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 2018 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2018 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>42.43</td>
<td>$1,527.06</td>
</tr>
<tr>
<td>33251</td>
<td>Operative ablation of supraventricular arrhythmogenic focus or pathway with cardiopulmonary bypass</td>
<td>46.96</td>
<td>$1,690.09</td>
</tr>
<tr>
<td>33254</td>
<td>Operative tissue ablation and reconstruction of atria, limited (e.g., modified Maze procedure)</td>
<td>39.41</td>
<td>$1,418.37</td>
</tr>
<tr>
<td>33255</td>
<td>Operative tissue ablation and reconstruction of atria, extensive (e.g., Maze procedure); without cardiopulmonary bypass</td>
<td>47.44</td>
<td>$1,707.37</td>
</tr>
<tr>
<td>33256</td>
<td>Operative tissue ablation and reconstruction of atria, extensive (e.g., Maze procedure); with cardiopulmonary bypass</td>
<td>56.30</td>
<td>$2,026.24</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>16.84</td>
<td>$606.07</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>19.03</td>
<td>$684.89</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>24.43</td>
<td>$879.24</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>39.31</td>
<td>$1,414.77</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>53.59</td>
<td>$1,921.51</td>
</tr>
</tbody>
</table>

CPT® is a registered trademark of the American Medical Association
<table>
<thead>
<tr>
<th>CPT*</th>
<th>Description</th>
<th>CY 2018 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2018 National Payment Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitral Valve Surgery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33420</td>
<td>Valvotomy mitral valve; closed heart</td>
<td>52.32</td>
<td>$1,883.00</td>
</tr>
<tr>
<td>33422</td>
<td>Valvotomy mitral valve; open heart, with cardiopulmonary bypass</td>
<td>48.52</td>
<td>$1,766.23</td>
</tr>
<tr>
<td>33425</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass</td>
<td>79.10</td>
<td>$2,846.81</td>
</tr>
<tr>
<td>33426</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass; with prosthetic ring</td>
<td>68.91</td>
<td>$2,480.07</td>
</tr>
<tr>
<td>33427</td>
<td>Valvuloplasty, mitral valve, with cardiopulmonary bypass; radical reconstruction, with or without ring</td>
<td>70.74</td>
<td>$2,545.93</td>
</tr>
<tr>
<td>33430</td>
<td>Replacement, mitral valve, with cardiopulmonary bypass</td>
<td>80.90</td>
<td>$2,911.59</td>
</tr>
<tr>
<td>Aortic Valve Surgery</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>54.95</td>
<td>$1,977.65</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>65.19</td>
<td>$2,346.19</td>
</tr>
<tr>
<td>33404</td>
<td>Construction of apical-aortic conduit</td>
<td>50.99</td>
<td>$1,835.13</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>65.62</td>
<td>$2,361.66</td>
</tr>
<tr>
<td>33406</td>
<td>Replacement, aortic valve, open, with cardiopulmonary bypass with allograft valve (freehand)</td>
<td>83.04</td>
<td>$2,988.61</td>
</tr>
<tr>
<td>33410</td>
<td>Replacement, aortic valve, open, with cardiopulmonary bypass with stentless tissue valve</td>
<td>73.60</td>
<td>$2,648.86</td>
</tr>
<tr>
<td>33411</td>
<td>Replacement, aortic valve; with aortic annulus enlargement, noncoronary sinus</td>
<td>96.94</td>
<td>$3,488.87</td>
</tr>
<tr>
<td>33412</td>
<td>Replacement, aortic valve with transventricular aortic annulus enlargement (Konno procedure)</td>
<td>91.94</td>
<td>$3,308.92</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>94.04</td>
<td>$3,384.50</td>
</tr>
<tr>
<td>CABG</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>54.06</td>
<td>$1,945.62</td>
</tr>
<tr>
<td>33534</td>
<td>Coronary artery bypass, using arterial graft(s); 2 arterial grafts</td>
<td>63.60</td>
<td>$2,288.96</td>
</tr>
<tr>
<td>33535</td>
<td>Coronary artery bypass, using arterial graft(s); 3 arterial grafts</td>
<td>70.86</td>
<td>$2,550.25</td>
</tr>
<tr>
<td>33536</td>
<td>Coronary artery bypass, using arterial graft(s); 4 or more arterial grafts</td>
<td>76.11</td>
<td>$2,739.20</td>
</tr>
<tr>
<td>33542</td>
<td>Myocardial resection</td>
<td>75.85</td>
<td>$2,729.84</td>
</tr>
<tr>
<td>33545</td>
<td>Repair of postinfarction ventricular septal defect, with or without myocardial resection</td>
<td>89.51</td>
<td>$3,221.46</td>
</tr>
<tr>
<td>33548</td>
<td>Surgical ventricular restoration procedure, includes prosthetic patch, when performed</td>
<td>86.13</td>
<td>$3,099.82</td>
</tr>
<tr>
<td>Surgical LAAM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33999</td>
<td>Unlisted procedure, cardiac surgery</td>
<td></td>
<td>At payer discretion</td>
</tr>
</tbody>
</table>
**Table 1. Physician Coding and Reimbursement continued**

<table>
<thead>
<tr>
<th>CPT*</th>
<th>Description</th>
<th>CY 2018 Total Facility Relative Value Units (RVUs)**</th>
<th>CY 2018 National Payment Rates</th>
</tr>
</thead>
<tbody>
<tr>
<td>93613</td>
<td>Intracardiac EP 3-dimensional mapping</td>
<td>9.38</td>
<td>$337.76</td>
</tr>
<tr>
<td>93631</td>
<td>Intra-operative epicardial and endocardial pacing and mapping to localize the site of tachycardia or zone of slow conduction for surgical correction</td>
<td>11.51</td>
<td>$414.35</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>24.33</td>
<td>$875.64</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>12.40</td>
<td>$446.28</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>32.68</td>
<td>$1,176.15</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>12.39</td>
<td>$445.92</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 $35.9996 (effective first quarter 2018).

* Indicates a secondary add-on procedure code to be listed with primary procedure code.

**Limited operative ablation**: Surgical isolation of triggers of supraventricular dysrhythmias by operative ablation that isolates the pulmonary veins or other anatomically defined triggers in the left or right atrium.

**Extensive operative ablation**: Services in limited ablation definition and additional ablation of atrial tissue to eliminate supraventricular dysrhythmias. This must include operative ablation that involves either the right atrium, the atrial septum or left atrium in continuity with the atrioventricular annulus.
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-PCS 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 2018 Medicare National Prospective Payment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac Surgical Ablation**</td>
<td>Other cardiothoracic procedures with MCC</td>
<td>6.594</td>
<td>9.8</td>
<td>$36,267.73</td>
</tr>
<tr>
<td></td>
<td>Other cardiothoracic procedures without MCC</td>
<td>4.581</td>
<td>4.8</td>
<td>$25,199.81</td>
</tr>
<tr>
<td>Cardiac Valve</td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization with MCC</td>
<td>9.497</td>
<td>14.4</td>
<td>$52,232.17</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization with CC</td>
<td>6.278</td>
<td>8.9</td>
<td>$34,530.87</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve and other major cardiothoracic procedures with cardiac catheterization without CC/MCC</td>
<td>5.685</td>
<td>5.9</td>
<td>$31,266.20</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve and other major cardiothoracic procedures without cardiac catheterization with MCC</td>
<td>7.604</td>
<td>11.2</td>
<td>$41,824.24</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve and other major cardiothoracic procedures without cardiac catheterization with CC</td>
<td>5.139</td>
<td>6.8</td>
<td>$28,264.33</td>
</tr>
<tr>
<td></td>
<td>Cardiac valve and other major cardiothoracic procedures without cardiac catheterization without CC/MCC</td>
<td>4.585</td>
<td>5.5</td>
<td>$25,212.46</td>
</tr>
<tr>
<td>CABG*</td>
<td>Coronary bypass with PTCA with MCC</td>
<td>8.113</td>
<td>12</td>
<td>$44,620.36</td>
</tr>
<tr>
<td></td>
<td>Coronary bypass with PTCA without MCC</td>
<td>5.837</td>
<td>8.5</td>
<td>$32,117.53</td>
</tr>
<tr>
<td></td>
<td>Coronary bypass with cardiac catheterization with MCC</td>
<td>7.343</td>
<td>12.9</td>
<td>$40,389.32</td>
</tr>
<tr>
<td></td>
<td>Coronary bypass with cardiac catheterization without MCC</td>
<td>5.057</td>
<td>8.7</td>
<td>$27,812.24</td>
</tr>
<tr>
<td></td>
<td>Coronary bypass without cardiac catheterization with MCC</td>
<td>5.778</td>
<td>10.1</td>
<td>$31,780.39</td>
</tr>
<tr>
<td></td>
<td>Coronary bypass without cardiac catheterization without MCC</td>
<td>3.883</td>
<td>6.5</td>
<td>$21,359.26</td>
</tr>
</tbody>
</table>

* indicates severity of illness; ** indicates a major complication or comorbidity.

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

*Source: Optum 360 DRG Expert 2018

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 in hospital outpatient prospective payment system (HOPPS) may include:

<table>
<thead>
<tr>
<th>CPT</th>
<th>Definition</th>
<th>APC</th>
<th>Title</th>
<th>CY 2018 Medicare National 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 atrial re-entry</td>
<td>5213</td>
<td>Level 3 EP Procedure</td>
<td>$18,514.85</td>
</tr>
<tr>
<td>93656</td>
<td>Comprehensive electrophysiologic evaluation including transeptal 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>5213</td>
<td>Level 3 EP Procedure</td>
<td>$18,514.85</td>
</tr>
</tbody>
</table>

*Source: FY18 Medicare outpatient rates based upon Final Rule release.
Table 4. Common ICD-10 codes used during cardiac surgery and EP ablation procedures

<table>
<thead>
<tr>
<th>ICD-10 CM</th>
<th>Diagnosis Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I48</td>
<td>Atrial fibrillation and flutter</td>
</tr>
<tr>
<td>I48.1</td>
<td>Persistent atrial fibrillation</td>
</tr>
<tr>
<td>I48.2</td>
<td>Chronic atrial fibrillation</td>
</tr>
<tr>
<td>I48.91</td>
<td>Unspecified atrial fibrillation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICD-10 PCS</th>
<th>Procedure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02563ZZ</td>
<td>Destruction of right atrium, percutaneous</td>
</tr>
<tr>
<td>02564ZZ</td>
<td>Destruction of right atrium, percutaneous endoscopic</td>
</tr>
<tr>
<td>02560ZZ</td>
<td>Destruction of right atrium, open</td>
</tr>
<tr>
<td>02573ZZ</td>
<td>Destruction of left atrium, percutaneous</td>
</tr>
<tr>
<td>02574ZZ</td>
<td>Destruction of left atrium, percutaneous endoscopic</td>
</tr>
<tr>
<td>02570ZZ</td>
<td>Destruction of left atrium, open</td>
</tr>
<tr>
<td>02572ZZ</td>
<td>Destruction of left pulmonary vein, open</td>
</tr>
<tr>
<td>02573ZZ</td>
<td>Destruction of left pulmonary vein, percutaneous</td>
</tr>
<tr>
<td>02574ZZ</td>
<td>Destruction of left pulmonary vein, percutaneous endoscopic</td>
</tr>
<tr>
<td>02B70ZK</td>
<td>Excision of left atrial appendage, open approach</td>
</tr>
<tr>
<td>02B74ZK</td>
<td>Excision of left atrial appendage, percutaneous endoscopic approach</td>
</tr>
<tr>
<td>02L70ZK</td>
<td>Occlusion of left atrial appendage with extraluminal device, open approach</td>
</tr>
</tbody>
</table>

*Source: FY18 AMA ICD-10 PCS codebook

For questions and/or additional information, please contact AtriCure’s Health Policy HelpLine Phone: (888)-347-6403.