<table>
<thead>
<tr>
<th>Identification of plaque components</th>
<th>Imaging method</th>
<th>Minimum Technical requirement</th>
<th>Optimal technical requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MRI</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| CT                                 | 1.5 Tesla scanner | Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• TSE: Turbo Spin Echo  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| US                                 | 16 Multi-detector-row CT scanner |                                 |                               |
| **CT**                             |               |                               |                               |
| **US**                             | Higher-frequency linear transducers (>7 MHz) |                                 |                               |
| **MRI**                            |               |                               |                               |
| CT                                 | 1.5 Tesla scanner | Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| US                                 | 16 Multi-detector-row CT scanner |                                 |                               |
| **MRI**                            |               |                               |                               |
| CT                                 | 1.5 Tesla scanner | Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| US                                 | 16 Multi-detector-row CT scanner |                                 |                               |
| **MRI**                            |               |                               |                               |
| CT                                 | 1.5 Tesla scanner | Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| US                                 | 16 Multi-detector-row CT scanner |                                 |                               |

**Quantitative measurements: Lumen, vessel wall and plaque components**

| MRI | 1.5 Tesla scanner | Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• MSDE: motion-sensitized driven equilibrium;  
• FSD: flow-sensitized dephasing. | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| CT | 16 Multi-detector-row CT scanner |                                 |                               |
| US | Higher-frequency linear transducers (>7 MHz) |                                 |                               |

**IPH**

| MRI | 1.5 Tesla scanner | IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 3 Tesla scanner with dedicated carotid coils  
• Resolution: In-plane 0.6 mm, through-plane 2 mm  
• Effective blood suppression for a plaque burden visualization sequence.  
• IR-FSPGR: Inversion Recovery Fast Spoiled Gradient Acquired in the steady state  
• IR-TFE: Inversion Recovery Turbo field echo [IR-TFE] or inversion Recovery Fast Spoiled | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| CT | 16 Multi-detector-row CT scanner |                                 |                               |
| US | Higher-frequency linear transducers (>7 MHz) |                                 |                               |

**Fibrous cap And Ulcer**

| MRI | 1.5 Tesla scanner | FFE:fast-field echo;  
• SPGR: echo-spoiled gradient-echo; | 3 Tesla scanner with dedicated carotid coils  
• FFE:fast-field echo;  
• SPGR: echo-spoiled gradient-echo; | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
| CT | 16 Multi-detector-row CT scanner |                                 |                               |
| US | Higher-frequency linear transducers (>7 MHz) |                                 |                               |

**Plaque Inflammation and Neovascularization**

| MRI | 1.5 Tesla scanner | TSE: Turbo Spin Echo  
• FSE: Fast Spin Echo | 3 Tesla scanner with dedicated carotid coils  
• TSE: Turbo Spin Echo  
• FSE: Fast Spin Echo  
• DCE: Dynamic contrast enhancement | 64 Multi-detector Row CT scanner  
• Higher-frequency linear transducers (>7 MHz) |
<p>| CT | 16 Multi-detector-row CT scanner |                                 |                               |</p>
<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Higher-frequency linear transducers (&gt;7 MHz) and microbubble injection</th>
<th>Higher-frequency linear transducers (&gt;7 MHz) and microbubble injection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calcium</strong></td>
<td>MRI</td>
<td>1.5 Tesla scanner</td>
<td>3 Tesla scanner with dedicated carotid coils</td>
</tr>
<tr>
<td></td>
<td>CT</td>
<td>16 Multi-detector-row CT scanner</td>
<td>Multi-energy CT spectral imaging (tissue decomposition for the identification of the different types of calcium)</td>
</tr>
<tr>
<td></td>
<td>US</td>
<td>Higher-frequency linear transducers (&gt;7 MHz)</td>
<td>Higher-frequency linear transducers (&gt;7 MHz)</td>
</tr>
</tbody>
</table>