The in vivo resolution is sufficient to visualize small (between 40 and 300 µm) vessels and evaluate vascularization with the help of Shibuya’s criteria.

- Mean vessel diameter correlated with the histopathologic status.
- Morphology

<table>
<thead>
<tr>
<th></th>
<th>Squamous dysplasia</th>
<th>ASD</th>
<th>CIS</th>
<th>Micro-invasive</th>
<th>Invasive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tortuous vessel networks</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Dotted vessels</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Spiral and screw type vessel</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
</tbody>
</table>

Adapted from Shibuya et al., Lung Cancer, 2010.
OUTLOOK: Optimization of the spectral design to improve the contrast and the depth selection

Diameter of the field of view: 300 µm

Backscattered white light healthy mucosa

Backscattered Violet (390 nm<\lambda<430 nm) light healthy mucosa
White light vs. Green (550 ± 25nm) comparison

**High Mag. cystoscopy**

**White light**

Magnification of **90x**

**Green backscattered light**

Magnification of **90x**