The Pachychoroid disease spectrum is a group of conditions which have characteristic morphologic changes implicating a common underlying disease process causing structural and functional choroidal alteration. These common features are illustrated below:

<table>
<thead>
<tr>
<th>Increased choroidal thickness</th>
<th>Dilated choroidal vessels</th>
<th>Overlying choriocapillaris attenuation</th>
<th>Associated RPE disturbances</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
</tr>
</tbody>
</table>

Optomap/Retinal Photo | Fundus Autofluorescence | Optical coherence tomography (OCT) | Description |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Pachychoroid Pigment Epitheliopathy (PPE)</strong></td>
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</tbody>
</table>
| ![Image](image5.png) | ![Image](image6.png) | ![Image](image7.png) | • Considered a forme fruste variant of CSCR  
• Typically asymptomatic with minimal fundus signs – possible pigment alteration.  
• No present or past history of sub-retinal fluid  
• FAF shows granular hypo-fluorescence and/or mixed stippled hypo and hyper-fluorescence  
• Drusen-like focal RPE elevations seen on OCT, possibly with an associated serous pigment epithelial detachment (PED) |
| **Acute Central Serous Chorioretinopathy (CSCR)** |
| ![Image](image8.png) | ![Image](image9.png) | ![Image](image10.png) | • Unilateral blur or metamorphopsia with a mild hyperopic shift  
• Raised appearance of the macula with frequent hyper or hypo pigment changes  
• FAF may show no apparent abnormality or hyper-fluorescence associated with the areas of sub-retinal fluid  
• OCT shows an well-defined serous retinal detachment usually associated with a PED. |

This reference is based on the current literature and evidence at the time of writing. This reference is designed a guide to aid diagnosis and management decisions however individual cases must be assessed in the context of all available clinical data.
# Pachychoroid Disease Spectrum

<table>
<thead>
<tr>
<th>Optomap/Retinal photo</th>
<th>Fundus Autofluorescence</th>
<th>Optical coherence tomography (OCT)</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Chronic Central Serous Chorioretinopathy (CSCR)** | ![Image](image1.png) | ![Image](image2.png) | - Widespread RPE decompensation with or without subretinal fluid  
- Long-standing cases are associated with hypo-fluorescent gravitational tracts on FAF  
- OCT shows outer retina and RPE atrophy  
- Risk of choroidal neovascularisation (CNV) increases with increased recurrence or chronicity  
- Reduced vision associated with macular atrophy and/or CNV |
| **Pachychoroid Neovasculopathy (PNV)** | ![Image](image3.png) | ![Image](image4.png) | - Development of type 1 CNV following PPE and/or CSCR.  
- Can progress to PCV (below)  
- May have associated blur or metamorphopsia  
- FAF highlights RPE changes overlying thick choroid  
- OCT shows a flat, irregular PED (double-layer sign) |
| **Polypoidal Choroidal Vasculopathy (PCV)/Aneurysmal Type 1 Neovascularization** | ![Image](image5.png) | ![Image](image6.png) | - Serosanguinous maculopathy characterised by type 1 CNV ending in aneurysmal dilations, which appear as polyp-like structure  
- Associated with serous neurosensory detachment and/or submacular haemorrhage  
- Funduscopy shows orange-red subretinal nodules  
- FAF shows ring-shaped abnormalities with hypo-autofluorescent centre (correspond to polyps) and hyper-autofluorescent surroundings  
- OCT shows a sharp PED peak and surrounding flat, irregular PED.  
- Indocyanine green angiography is the gold standard for diagnosing PCV |
| **Focal Choroidal Excavation (FCE)** | ![Image](image7.png) | ![Image](image8.png) | - Localised area of choroidal excavation without evidence of posterior staphyloma or scleral ectasia  
- Asymptomatic or mild blurring of vision or metamorphopsia  
- Funduscopy may be normal or show non-specific pigmentedary changes  
- OCT shows two patterns of excavation – conforming (photoreceptor tips are in direct contact with RPE as shown here) and non-conforming (photoreceptor tips are detached from RPE) |

*Please note peripapillary pachychoroid syndrome, is also considered part of the pachychoroid disease spectrum but not described in this reference.*