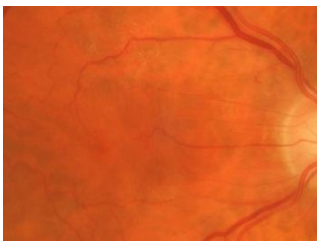
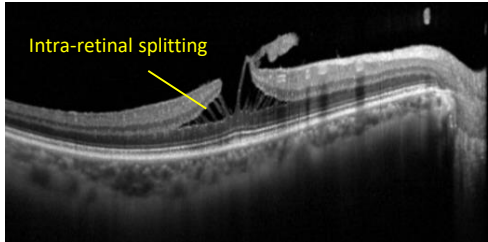

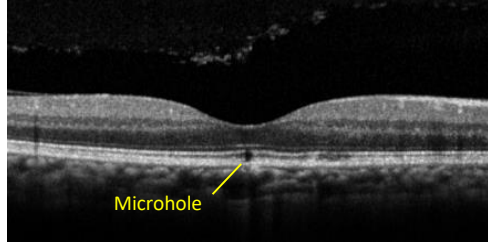
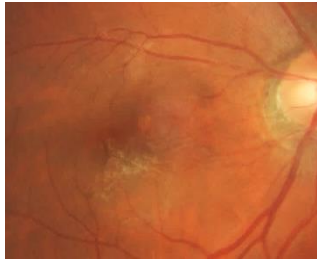
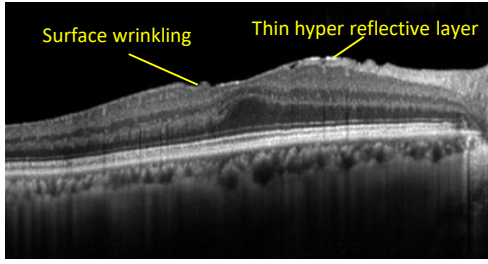
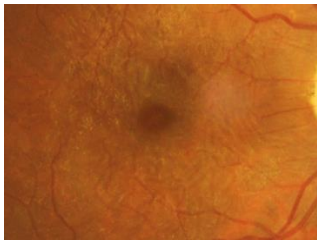
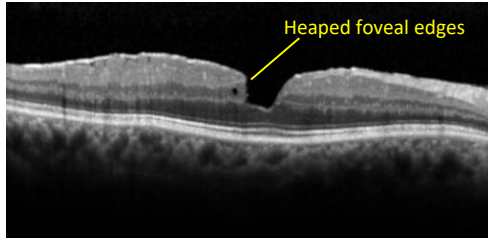
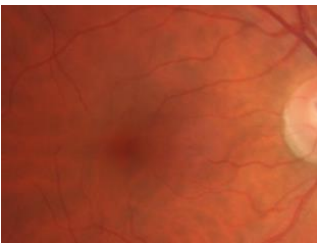
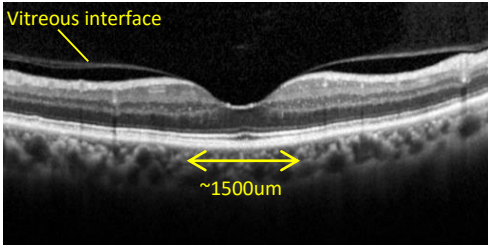
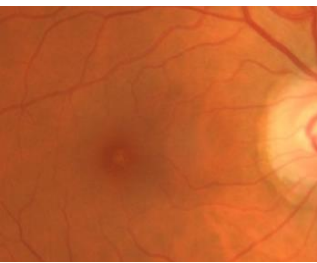
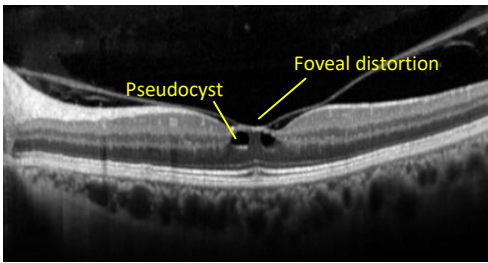
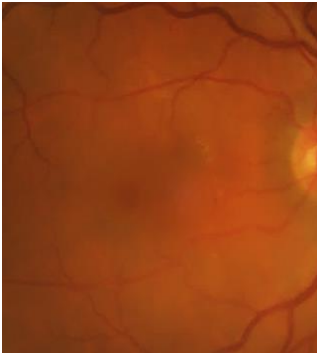
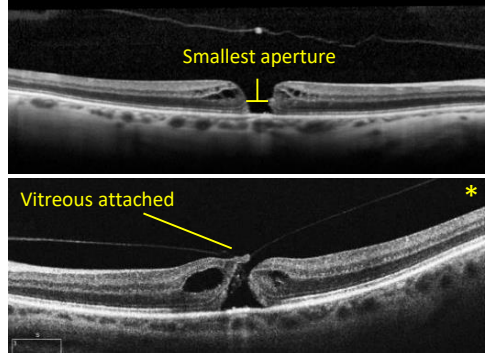


Definition and aetiology	Retinal photo	Optical coherence tomography (OCT)	Clinical features and management
Lamellar Macular Hole			
<ul style="list-style-type: none"> Partial thickness foveal defect with intact photoreceptors at base Thought to arise from incomplete FTMH formation and/or centripetal traction from ERM 		 <p>Intra-retinal splitting</p>	<ul style="list-style-type: none"> Intact photoreceptors at base Irregular foveal contour Defect in the inner fovea May have intra-retinal splitting (schisis) <i>Consider referral if associated with symptoms/vision reduction</i>
Macular Microhole			
<ul style="list-style-type: none"> A small reddish foveal lesion with a small focal discontinuity within the outer retina. Aetiology uncertain but abnormal vitreoretinal interaction may play a role Does not include defects of other aetiologies (eg solar retinopathy) 		 <p>Microhole</p>	<ul style="list-style-type: none"> Appears as small reddish lesion at or adjacent to fovea Focal discontinuity of RPE, photoreceptors and/or external limiting membrane <i>Normally stable with no treatment required</i>
Epiretinal membrane (ERM)			
<ul style="list-style-type: none"> Membrane of glial cells and laminocytes attached to remnants of vitreous cortex on the retinal surface Can occur at any stage of vitreous separation and can be associated with tears, holes and detachments elsewhere (as well as trauma, past laser) 		 <p>Surface wrinkling Thin hyper reflective layer</p>	<ul style="list-style-type: none"> Thin distinct hyper reflective layer above ILM Can cause tractional stress on underlying retina May be associated with wrinkling of retinal surface, loss of foveal pit, retinal thickening and pseudocystic spaces <i>Consider referral if associated with symptoms/vision reduction</i>
Macular Pseudohole			
<ul style="list-style-type: none"> A lesion with a similar appearance to of full thickness hole but with no full thickness defect Caused by invagination of the perifoveal retina by the contracture forces of an ERM 		 <p>Heaped foveal edges</p>	<ul style="list-style-type: none"> Discrete, reddish, round or oval lesion in the fovea Concomitant ERM with central opening not affecting photoreceptors Invaginated or heaped foveal edges Steep macular contour to the central fovea No loss of foveal tissue <i>Refer for possible treatment if associated with vision reduction</i>

Posterior vitreous detachment (PVD) is a natural course of events that normally involves a gradual separation of the posterior vitreous cortex from the inner retinal surface. It typically begins posteriorly and progresses up to the posterior border of the vitreous base. The macula has a relatively strong vitreous attachment and consequently the PVD process can involve large amounts of macula traction with potential complications. More recently, OCT based findings have been used to better classify these complications (with studies showing radial as well as raster scans to be helpful in these cases). Please note this chair-side reference was designed to assist optometrists in private practice when distinguishing between the different types of vitreomacular interface disorders. It provides general information only and may not be applicable to atypical cases.

Definition and aetiology	Retinal photo	Optical coherence tomography (OCT)	Clinical features and management
Vitreomacular Adhesion (VMA)			
<ul style="list-style-type: none"> Vitreous adhesion to central macula with no evidence of retinal morphologic changes Classified by diameter of vitreous attachment to the macular surface Normal finding in natural course of PVD 			<ul style="list-style-type: none"> Unremarkable fundus appearance Macular attachment of the vitreous cortex within a 3mm radius of fovea centre with perifoveal vitreous cortex detachment from the retinal surface No detectable change in foveal contour or underlying tissues Focal adhesion $\leq 1500\mu\text{m}$ Broad adhesion $> 1500\mu\text{m}$ <i>Needs routine review only</i>
Vitreomacular Traction (VMT)			
<ul style="list-style-type: none"> Vitreous adhesion and traction on the central macula (within a 3mm radius of the fovea centre and with perifoveal vitreous cortex detachment) causing distortion of foveal surface and/or intra-retinal abnormalities. Part of anomalous PVD progression 			<ul style="list-style-type: none"> May or may not have yellow discoloration of the central macula Can involve intra-retinal/structural changes: Foveal distortion, elevation, schisis, pseudocyst formation, elevation of the retina from the RPE Focal adhesion $\leq 1500\mu\text{m}$ Broad adhesion $> 1500\mu\text{m}$ <i>Consider referral if associated with symptoms/vision reduction or if fellow eye has suffered macular hole previously (increased risk)</i>
Full-Thickness Macular Hole (FTMH)			
<ul style="list-style-type: none"> Full-thickness foveal break Classified primarily by size (horizontal width at narrowest aperture) of hole and secondarily by status of vitreous (presence or absence of VMT) Common aetiologies include tractional forces from vitreous or ERM and trauma 			<ul style="list-style-type: none"> Appears as round red lesion at central macula Interruption of all neural retinal layers from internal limiting membrane (ILM) up to (not including) the RPE Edges of hole are typically rounded and pulled anteriorly, often containing pseudocysts Hole size (smallest aperture) <ul style="list-style-type: none"> ➤ Small: $< 250\mu\text{m}$ ➤ Medium: $250\mu\text{m}-400\mu\text{m}$ ➤ Large: $> 400\mu\text{m}$ <i>Typically requires urgent referral</i> <i>Surgical outcome/closure rate reduces with larger hole size and increased chronicity</i>
<p>*Please note this OCT images has been taken from a different eye to demonstrate possible variations</p>			