



Comparing the International Clinical Diabetic Retinopathy (ICDR) severity scale

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ICDR severity scale	Scottish grading protocol	English protocol	Example retinal images with labelled features
Retinopathy grade			
No diabetic retinopathy (DR)	R0	No DR (R0)	Normal retina
Mild non-proliferative diabetic retinopathy (NPDR) Microaneurysms only	R1 Microaneurysms or haemorrhages with or without hard exudates	Background DR (R1)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Mild NPDR</p> <p>Microaneurysm</p> </div> <div style="text-align: center;"> <p>Moderate NPDR</p> <p>Blot haemorrhages Cotton wool spots Hard exudates</p> </div> </div>
Moderate NPDR 1 Any of the following: • microaneurysms • retinal dot or blot haemorrhages • hard exudates or cotton wool spots 2. No signs of severe NPDR	R2 4 or more blot haemorrhages in 1 hemifield only		
Severe NPDR 1 More than twenty intraretinal haemorrhages in all 4 quadrants 2 Definite venous beading in 2 or more quadrants 3 Prominent intraretinal microvascular abnormality (IRMA) in 1 or more quadrants 4 No signs of proliferative retinopathy	R3 4 or more blot haemorrhages in superior and inferior hemifields	Pre-proliferative DR (R2)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Severe NPDR</p> <p>Microaneurysms and blot haemorrhages in all four quadrants Venous beading</p> </div> <div style="text-align: center;"> <p>IRMA IRMA</p> </div> </div>
Proliferative DR One or both of the following: • neovascularisation (new vessels) • vitreous/pre-retinal haemorrhage	R4	Proliferative DR (R3)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Proliferative DR</p> <p>Neovascularisation (new vessels)</p> </div> <div style="text-align: center;"> <p>Neovascularisation (new vessels)</p> </div> </div>
Maculopathy grade			
No macular oedema No exudates or apparent retinal thickening within one disc diameter (DD) of the fovea	M0	M0	Normal macula
Macular oedema Exudates or apparent thickening within 1 DD of the fovea	M1 Any lesions within 2 DD but more than 1 DD from the fovea	M1	Macular oedema
	M2 Any lesions < 1 DD from the fovea		<div style="display: flex; justify-content: space-around;"> </div> <p>Examples of maculopathy showing exudates within 1 disc diameter (DD) of the fovea</p>

DR: diabetic retinopathy, NPDR: non-proliferative diabetic retinopathy, IRMA: intraretinal microvascular abnormality, DD: disc diameter