**Table 4.1: Brief Descriptions of Features in Fundus Images of Diseases and Conditions.**

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| **ID** | **urgency** | **Diseases/conditions** | **Brief descriptions of fundus images** |
| 0 |  | Nonreferable |  |
| 0.0 | O | Normal | orange-red fundus with red branched curving vasculature enter the pink optic disc with sharp margins and a C/D ratio of approximately 0.35 |
| 0.1 | O | Tessellated fundus | diffuse attenuation of the RPE with visibility of large choroidal vessels |
| 0.2 | R | Large optic cup | C/D>0.5, with a pink neuroretinal rim in ISNT rule, without notching or bayoneting of vessels |
| 0.3 | R | DR1 | Microaneurysms only (International Classification of DR 2017) |
| 1 |  | Referable DR |  |
| 1.0 | S | DR2 | microaneurysms and other signs (dot and blot hemorrhages, hard exudates), less than severe nonproliferative DR, and/or with DME |
| 1.1 | U | DR3 | severe nonproliferative DR and proliferative DR (neovascularization, vitreous/preretinal hemorrhage) |
| 2 |  | RVO |  |
| 2.0 | S | BRVO | tortuosity and dilatation of affected veins, with dot, blot and ﬂame haemorrhages, sometimes with cotton wool spots or hard exudates |
| 2.1 | S | CRVO | tortuosity and dilatation of all branches of veins, with dot, blot and ﬂame haemorrhages, sometimes with cotton wool spots or hard exudates |
| 3 | U | RAO | attenuation of arteries and veins, cherry red fovea, in contrast to the cloudy white oedematous retina effected by artery occlusion |
| 4 | U | Rhegmatogenous RD | slightly opaque, convex or corrugated appearance of elevated retina, sometimes with breaks in view |
| 5 |  | Posterior serous/exudative RD | |
| 5.0 | S | CSCR | round or oval retinal elevation with clear or trubid fluid underneath, sometimes with depigmented RPE foci or small patches of RPE atrophy or hyerplasia |
| 5.1 | U | VKH disease | circumscribed retinal edema, multiple exudative retinal detachments of posterior retina, often with optic disc hyperemia and edema, obscure retina with slight radial folds can be seen with the resolving of edema |
| 6 | U | Maculopathy | Lesions within macular area, such as intermediate AMD (drusen >125µm), neovascular-AMD, RAP,PCV, CNV, IMT, and macular atrophy, not caused by other listed categories of diseases |
| 7 | S | ERM | a cellophane sheen sheet on or above the surface of the retina with macular pucker, distortion of blood vessels within vessel arches |
| 8 | U | MH | central foveal defect , round or oval shape, maybe with multiple yellow deposits within the crater surrounded or a cuff of subretinal fluid |
| 9 | S | Pathological myopia | tessellated fundus with focal chorioretinal atrophy, fuchs spot, lacquer cracks, CNV or subretinal haemorrhage |
| 10 |  | Optic nerve degeneration |  |
| 10.0 | U | Possible glaucoma | large C/D ratio with cup excavation, thinning of neuroretinal rim, notching and bayoneting of vessels with RNFL defects, disc haemorrhages, baring of circumlinear blood vessels, laminar dot sign, peripapillary atrophy |
| 10.1 | S | Optic atrophy | white disc, reduction of small vessels on the disc, attenuation of peripapillary vessels and thinning of RNFL, sometimes with Paton lines |
| 11 | U | Severe hypertensive retinopathy | cotton-wool spots, arteriolar narrowing, arteriolosclerosis, flame-shaped haemorrhages, retinal oedema, macrlar star and disc oedema |
| 12 | U | Disc swelling and elevation | disc hyperaemia, elevation of indistinct disc margins, sometimes with peripapillary ﬂame haemorrhages and cotton wool spots |
| 13 | R | Dragged disc | temporal vascular straightening, retinal fold or vitreous bands extending from peripheral area to the disc, |
| 14 | R | Congenital disc abnormality | optic disc coloboma, morning glory anomaly, pit, megalopapilla and hypoplastic disc |
| 15 |  | Pigmentary degeneration |  |
| 15.0 | R | Retinitis pigmentosa | mid-peripheral RPE atrophy with bone-spicule perivascular pigmentation, arteriorlar attenuation and waxy disc pallor |
| 15.1 | R | Bietti crystalline dystrophy | numerous fine, glistening, yellow-white crystals, atrophy of the RPE and choriocapillaris with normal optic disc and retinal vasculature |
| 16 | S | Peripheral retinal degeneration and break | Lattice, snailtrack, pavingstone, honeycomb, peripheral drusen, microcystoid and white-without pressure, sometimes with retinal break |
| 17 | R | Myelinated nerve fiber | whitish striated patches with feathery borders that obscure retinal vessels |
| 18 | S | Vitreous particles | including asteroid hyalosis, synchysis scintillans and deposits on familial amyloidosis |
| 19 | U | Fundus neoplasm | slightly elevated, dome or mushroom shaped mass in various colors |
| 20 | S | Massive hard exudates | waxy yellow lesions with distinct margins arranged in large clumps, not caused by other listed categories of diseases (wet-AMD, RVO, or DR), usually Coats’ disease, IRVAN, macroaneurysms or other vessel abnormalities |
| 21 | S | Yellow-white spots/flecks | multiple, discrete, yellow-white, round dot or polymorphous fleck lesions, including early AMD (drusen <125µm) |
| 22 | S | Cotton-wool spots | small, whitish, ﬂuffy superficial lesions in the post-equatorial fundus, not caused by other listed categories of diseases (severe hypertensive retinophathy, RVO, or DR) |
| 23 | S | Vessel tortuosity | tortuous and sometimes dilated arteries and veins locally or spread the retina without other listed diseases |
| 24 | S | Chorioretinal atrophy/coloboma | focal or extensive RPE and choroidal atrophy or coloboma, not caused by pathological myopia |
| 25 | U | Preretinal haemorrhage | usually round red lesion obscures all underlying retinal landmarks, sometimes with boat-shaped crescentic configuration, haemorrhage may break though into the vitreous, not caused by other listed categories of diseases (wet-AMD, RVO, or DR) |
| 26 | U | Fibrosis | irregular greyish-white opacification often with distortion of the retinal vasculature, crossing vessel arches |
| 27 | R | Laser spots | multiple, uniform, round, discrete yellow-white or brown lesions caused by photocoagulation |
| 28 | R | Silicon oil in eye | shiny reflection from the retina-oil interface |
| 29 |  | Blur fundus |  |
| 29.0 | S | Blur fundus without PDR | blur retinal landmarks caused by severe lens opacities, vitreous opacities or haemorrhage |
| 29.1 | U | Blur fundus with suspected PDR | blur retinal landmarks with suspected features of PDR |

Abbreviations: C/D cup disc ratio, DR diabetic retinopathy, PDR proliferative diabetic retinopathy, DME diabetic macular edema, BRVO branch retinal vein occlusion, CRVO central retinal vein occlusion, RAO retinal artery occlusion, RD retinal detachment, CSCR central serous chorioretinopathy, ERM epiretinal membrane, MH macular hole, RPE retinal pigment epithelium, AMD age-related macular degeneration, PCV polypoidal choroidal vasculopathy, CNV choroidal neovascularization, CEC central exudative chorioretinopathy, RNFL retinal nerve fiber layer, IRVAN idiopathic retinal vasculitis-aneurysms-neuroretinitis syndrome. Annotations: Lattice - spindle shaped areas with arborizing network of white lines and RPE hyperplasia, Snailtrack -sharply demarcated bands of tightly packed snowflakes, Pavingstone - discrete, yellow-white patches of focal chorioretinal atrophy, Honeycomb - fine network of pigmentation, Peripheral drusen - multitude of tiny pale dots that may be associated with mild pigmentary changes, Microcystoid - tiny vesicles with indistinct borders on a greyish-white background, Whit-without pressure - superficial grey area with a geographic configuration. O observation, R routine, S semi-urgent, U urgent.