

## RAP

RAP is a particular type of intraretinal neovascularization consisting of vascular anastomosis of aberrant retinal vessels. In choroidal neovascular membranes, new vessels proliferate through the RPE and infiltrate the retina and eventually communicate with the retinal circulation to produce retinochoroidal anastomosis. In RAP, the neovascularization originates in the same retinal vessels. The diagnosis is based on the presence of hyperfluorescence corresponding to the neovascularization (hot spot) in ICGA images, and the presence of dilated retinal vessels associated with multiple intraretinal, preretinal, or subretinal hemorrhages, with varying degrees of intraretinal edema in the fundus examination. A proposed three-stage classification is seen in [Table 2](#).

Although the initial stages are only visible by fundus examination and angiographic examinations due to the small size of the initial injury, OCT is extremely useful for identifying RAP and its associated manifestations. [6-8,19,27-29](#)

The initial signs that correspond to stage 1 (intraretinal vascularization) consist of a focal area, usually extrafoveal, with increased retinal reflectivity that are not associated with epiretinal, intraretinal, or subretinal changes or changes in the retinal thickness. Progression of RAP on OCT is characterized by the presence of intraretinal or subretinal fluid, the former characterized by well-defined confluent hyporeflective spaces and the latter (neurosensory detachment) characterized by a well-defined hyporeflective space between the neurosensory foveal retina and other highly reflective bands corresponding to the RPE. When RAP reaches the subretinal space and merges with the RPE, a serous detachment of the RPE usually develops (stage 2 or CNV). In well-developed cases, there may be retinal choroidal anastomoses (stage 3 or CNV) and it is impossible to clearly differentiate stage 2 from stage 3 on OCT.

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