# Abstract 86

## TEN-YEAR INCIDENCE OF FIBROSIS AND RISK FACTORS FOR ITS DEVELOPMENT IN NEOVASCULAR AGE-RELATED MACULAR DEGENERATION.

**Oral**

Romano F.*[1], Cozzi E.[1], Airaldi M.[1], Nassisi M.[2], Viola F.[2], Aretti A.[2], Milella P.[2], Teo K.C.[3], Cheung G.[3], Staurenghi G.[1], Invernizzi A.[1]

*[1]Luigi Sacco Hospital ~ Milan ~ Italy, [2]IRCCS Ca' Granda Ospedale Maggiore Policlinico ~ Milan ~ Italy, [3]Singapore National Eye Center ~ Singapore ~ Singapore*

**Purpose:**

To report the cumulative incidence and risk factors for fibrosis at 10 years of follow-up in a large cohort of neovascular age-related macular degeneration (nAMD) patients at two referral centers in Milan.

**Methods:**

Retrospective, multicenter, observational study. We included 225 naïve nAMD eyes (207 patients) who underwent intravitreal anti-vascular endothelial growth factor (VEGF) treatment over 10 years. Clinical and imaging data on the characteristics of macular neovascularization (MNV) were reviewed at baseline. Visual acuity (VA), central subfield thickness (CST), lesion activity, number of injections and of submacular hemorrhages were collected on an annual basis. Fibrosis onset was defined clinically assessing color photographs, fundus descriptions or fluorescein angiograms. Optical coherence tomography (OCT) scans obtained at fibrosis onset were inspected by an external reading center and graded as sub-retinal pigment epithelium (RPE), mixed or sub-retinal.

**Results:**

Mean[SD] age at baseline was of 72.1[6.9] years. Incidence rate of fibrosis was estimated as 8.9 per 100 person-years with a cumulative incidence of 62.7% at 10 years. On OCT, 46.1% of fibrotic lesions were graded as sub-RPE, 29.8% as mixed and 22.7% as subretinal.
Independent factors associated with fibrosis included: larger CST variation ($p<0.001$), submacular hemorrhages ($p=0.008$), higher number of injections ($p=0.01$), lower baseline VA ($p=0.03$). Type 2 (classic) MNV was significantly associated with both mixed and sub-retinal fibrosis.
At 10 years VA declined of -16.4 letters from baseline, particularly in the presence of mixed and sub-retinal fibrosis ($p<0.001$).

**Conclusions:**

We found a 62.7% cumulative incidence of fibrosis in a large nAMD cohort at 10 years of follow-up. Fibrosis was more common with frequent reactivations and lower baseline VA; its onset significantly impacted on final visual outcomes. This supports the hypothesis that nAMD should be promptly treated with pro-active regimens.