ELEVATED CONCENTRATIONS OF PENTRAxin-3 ARE ASSOCIATED WITH NEOInTIMAL TISSUE
CHARACTERIZATION OF RESTENOSIS LESIONS AFTER BARE-METAL AND DRUG-ELUTING STENT
IMPLANTATION

i2 Poster Contributions
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Background: Although optical coherence tomography (OCT) studies reported various patterns of restenotic tissue after bare-metal (BMS) and drug-eluting stents (DES) implantation, the clinical significance of these tissue is unknown.

Methods: OCT was performed to assess intimal tissue morphology in consecutive 18 patients presenting with in-stent restenosis (ISR) within 1 year after stenting (5 BMS and 13 DES). Qualitative restenotic tissue analysis included tissue structure, backscattering, and visible microvessels. The serum levels of pentraxin-3 (PTX-3), plate activation inhibitor-1 (PAI-1) and eosinophil cationic protein (ECP) were measured by enzyme-linked immunoadsorbent assay in plasma obtained from the aortic root (AO) and the coronary sinus (CS).

Results: Although PAI-1 and ECP levels were similar between the Ao and CS, PTX-3 level of the CS were significantly higher compared to that of the AO in DES ISR, but not in BMS ISR lesions. In the DES ISR, PTX-3 levels of the CS was significantly higher in DES ISR lesions with predominant low backscatter than in those with high backscatter (p=0.02). However, other tissue morphologies including the presence of microvessels and tissue structures were not associated with elevated PTX-3 levels. PAI-1 and ECP levels both of the AO and CS did not correlated with any OCT tissue morphology.

Conclusions: Recruitment and activation of inflammatory cells correlated with abnormal tissue morphology after DES implantation that may lead to ISR.