RA drug comparison: only JAK reduced PRO-C3

In a Japanese RA cohort (n=149), all four drug classes (MTX, adalimumab/TNF, tocilizumab/IL6, tofacitinib/JAK) reduced C3M (tissue destruction). But only tofacitinib (JAK inhibitor) significantly reduced PRO-C3 (p=0.017). This demonstrates that anti-inflammatory efficacy does not equal anti-fibrotic efficacy, and ECM biomarkers can differentiate mechanisms of action.[6]

Does the drug impact both tissue destruction (C3M) and fibrogenesis (PRO-C3)?

Differential impacts of therapy on type III collagen turnover markers

Rheumatoid arthritis study

	Methotraxate (N=21)			Adalimumab (TNFa) (N=49)			Tocilizumab (IL6) (N=49)			Tofacitinib (JAK) (N=27)		
	Median conc. At baseline	Median Change	P value	Median conc. At baseline	Median Change	P value	Median conc. At baseline	Median Change	P value	Median conc. At baseline	Median Change	P value
C3M	33	**- 18%**	**0.0052**	27	**- 15 %**	**0.021**	37	**-27%**	**<0.0001**	34	**-12%**	**0.0001**
PRO-C3	15	**+17%**	**ns**	18	**0**	**ns**	15	**+16%**	**ns**	19	**-27%**	**0.017**

Anti-inflammatory / inhibit tissue destruction | **Anti-fibrogenic**

RA cohort from UOEB (Japan); Mixed RA population (arthritis duration >3 months) with active RA were enrolled. Patients fulfilled the ACR/EULAR2010 criteria for RA (N = 149). Patients were treated with MTX (n=21), adalimumab+MTX (n=49), tocilizumab+MTX (n=49) or Tofacitinib+MTX (n=27) and followed for 1 year. Paired t-test using log-transformed data from baseline and FU. Data is shown as median with interquartile ranges (IQR). Alpha = 0.05.

Gudmann NS, Clin Exp Rheumatol. 2018