

# ORGANIC CATION TRANSPORTER (OCTN)-1 VARIANTS SHAPE INNATE IMMUNITY AND PREDICT INDIVIDUAL RESPONSE TO VEDOLIZUMAB IN ULCERATIVE COLITIS PATIENTS

Franco Scaldaferri

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Poster

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**OCTN1 503F genetic variant in ulcerative colitis patients is associated with increased IL-1 $\beta$  secretion, higher pancolitis rates, and reduced long-term response to Vedolizumab compared to 503L genotype.**

## KEY POINTS

- In a prospective cohort of 90 UC patients starting anti-TNF $\alpha$  or Vedolizumab, those with OCTN1 503L genotype on Vedolizumab showed higher long-term response rates (OR 8.92,  $p=0.019$ ), while 503F genotype with Vedolizumab was associated with lower response (OR 0.02,  $p=0.038$ ).
- Primary monocytes bearing the OCTN1 503F variant displayed increased IL-1 $\beta$  production in response to peptidoglycan and live bacteria, while OCTN1-deficient cells showed reduced IL-1 $\beta$  secretion.
- Patients with 503F genotype showed higher rates of pancolitis compared to 503L genotype in both the prospective cohort and in a separate cohort of 92 patients in remission (62.5% vs 44%).
- Among 92 UC patients in remission for at least two years, those with 503F genotype were less frequently on Vedolizumab (12.5%) compared to 503L patients (44%).
- This pharmacogenetic study may inform personalized therapy selection in ulcerative colitis based on OCTN1 genotype.

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