Response to: 'Comment on: 'Successful remission with tofacitinib in a patient with refractory Takayasu arteritis complicated by ulcerative colitis' by Kuwabara *et al*' by Rios Rodriguez *et al*

We thank Rios Rodriguez *et al* for sharing their interesting case with us. Both of us reported that tofacitinib, a janus kinase (JAK) inhibitor, showed a favourable therapeutic effect in each patient with Takayasu arteritis (TAK) complicated by ulcerative colitis¹ or psoriatic arthritis.² These complications are in the same spectrum as spondyloarthritis, in which IL-23/Th17 axis plays an important pathophysiological role and the effectiveness of JAK inhibitors was demonstrated by randomised control studies.³ As Rios Rodriguez *et al* mentioned, some population of TAK has the overlapped features with spondyloarthritis.⁴ It is not unexpected if JAK inhibitors are effective in the population of TAK. But, it is unclear if JAK inhibitors are broadly useful in patients with TAK due to the heterogeneity of the disease. Th1/Th17-mediated autoimmunity is thought to be the main pathogenesis of TAK, whereas B cells and granulocytes also contribute to the development of vascular inflammation in TAK.⁵ Rituximab may be more feasible for B cell-dominant TAK,⁶ and tumour necrosis factor- α inhibitors may be suitable for granulocyte-dominant TAK.⁷ We believe that a large-scale randomised control trial should be conducted to clarify whether JAK inhibitors are effective in the whole population of TAK. JAK inhibitors have been tested in many clinical trials as a promising drug for various rheumatic diseases.³ If the indications for JAK inhibitors are expanded including TAK, we have to pay close attention to the safety as well as the efficacy in clinical practice. We and Rios Rodriguez *et al* described successful implementation of JAK inhibition therapy in patients with TAK.

Shun Tanimura , Hiroyuki Nakamura, Tetsuya Horita

Correspondence to Dr Tetsuya Horita, Internal Medicine, Tomakomai City Hospital, Tomakomai, Hokkaido 053-8567, Japan; thorita@med.hokudai.ac.jp

Contributors ST and HN wrote the manuscript. TH contributed to the discussion and edited the manuscript. All authors read and approved the final manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting or dissemination plans of this research.

Patient consent for publication Not required.

Provenance and peer review Commissioned; internally peer reviewed.

© Author(s) (or their employer(s)) 2020. No commercial re-use. See rights and permissions. Published by BMJ.

To cite Tanimura S, Nakamura H, Horita T. *Ann Rheum Dis* Epub ahead of print: [please include Day Month Year]. doi:10.1136/annrheumdis-2020-218055

Received 19 May 2020

Accepted 4 June 2020

► <http://dx.doi.org/10.1136/annrheumdis-2020-217894>

Ann Rheum Dis 2020;**0**:1. doi:10.1136/annrheumdis-2020-218055

ORCID iDs

Shun Tanimura <http://orcid.org/0000-0002-9640-2527>

Tetsuya Horita <http://orcid.org/0000-0003-2332-3841>

REFERENCES

- 1 Kuwabara S, Tanimura S, Matsumoto S, *et al*. Successful remission with tofacitinib in a patient with refractory Takayasu arteritis complicated by ulcerative colitis. *Ann Rheum Dis* 2020. doi:10.1136/annrheumdis-2019-216606. [Epub ahead of print: 25 Mar 2020].
- 2 Rodriguez R V, Rademacher J, Protodopov M, *et al*. Comment on: 'Successful remission with tofacitinib in a patient with refractory Takayasu arteritis complicated by ulcerative colitis' by Kuwabara *et al*. *Ann Rheum Dis* 2020. 10.1136/annrheumdis-2020-217894
- 3 Fragoulis GE, McInnes IB, Siebert S. JAK-inhibitors. new players in the field of immune-mediated diseases, beyond rheumatoid arthritis. *Rheumatology* 2019;58:143–54.
- 4 Mielnik P, Hjelle AM, Nordeide JL. Coexistence of Takayasu's arteritis and ankylosing spondylitis may not be accidental - Is there a need for a new subgroup in the spondyloarthritis family? *Mod Rheumatol* 2018;28:313–8.
- 5 Matsumoto K, Suzuki K, Yoshimoto K, *et al*. Significant association between clinical characteristics and changes in peripheral immuno-phenotype in large vessel vasculitis. *Arthritis Res Ther* 2019;21:304.
- 6 Hoyer BF, Mumtaz IM, Lodenkemper K, *et al*. Takayasu arteritis is characterised by disturbances of B cell homeostasis and responds to B cell depletion therapy with rituximab. *Ann Rheum Dis* 2012;71:75–9.
- 7 Tanimura S, Kato M, Abe N, *et al*. Successful treatment of tocilizumab-resistant large vessel pulmonary arteritis with infliximab. *Immunol Med* 2018;41:39–42.