Response to: 'Efficacy and safety of tocilizumab in patients with refractory Takayasu arteritis' by Lee and Song

I thank Lee and Song¹ for their thoughtful comments on our recent publication.² The authors state that our study did not examine the steroid-sparing effect of tocilizumab because of mandatory glucocorticoid tapering. Given that the dose reduction rate of glucocorticoid significantly correlates with the relapse rate,³ this randomised, double-blind, placebo-controlled study was designed with mandatory glucocorticoid tapering to investigate whether tocilizumab treatment enables glucocorticoid tapering without relapse of Takayasu arteritis. Although the primary endpoint, time to relapse of Takayasu arteritis, was not met in our study, the results suggested the effect of tocilizumab as a promising steroid-sparing agent. Moreover, the steroid-sparing effect of tocilizumab was observed during an open-label extension period of the study in which the glucocorticoid dose was tapered based on the disease activity of the patient.⁴ The final results from the long-term extension will be reported in future publications.

I concur with Lee and Song that methotrexate and mycophenolate mofetil are commonly used therapeutic agents in patients with refractory Takayasu arteritis. As shown in online supplementary figure S1, 25 of 36 (69.4%) patients in our study had previously received disease-modifying antirheumatic drugs or immunosuppressants. Our study, however, was designed to compare tocilizumab with placebo because the use of immunosuppressive agents had not been found to have a consistent clinical benefit or steroid-sparing effect in a prospective comparative study.⁵ The findings in our randomised controlled study support the use of tocilizumab as one of the treatment options for patients with Takayasu arteritis who are resistant to glucocorticoid therapy and in whom glucocorticoid withdrawal is difficult. Further discussion of an evidence-based treatment algorithm for patients with Takayasu arteritis is warranted in the future.

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REFERENCES

- 1 Lee YH, Song GG. Efficacy and safety of tocilizumab in patients with refractory Takayasu arteritis. *Ann Rheum Dis* 2019;**78**:e9.
- 2 Nakaoka Y, Isobe M, Takei S, *et al.* Efficacy and safety of tocilizumab in patients with refractory Takayasu arteritis: results from a randomised, double-blind, placebo-controlled, phase 3 trial in Japan (the TAKT study). *Ann Rheum Dis* 2018;**77**:348–54.
- 3 Ohgishi H, Haraguchi G, Konishi M, *et al.* Improved prognosis of Takayasu arteritis over the past decade—comprehensive analysis of 106 patients. *Circ J* 2012;**76**:1004–11.
- 4 Nakaoka Y, Isobe M, Takei S, *et al.* Long-Term Efficacy and safety of tocilizumab in patients with refractory Takayasu arteritis treated continuously over 52 weeks: results from phase 3, randomized, double-blind, placebo-controlled trial and open-label extension in Japan. *Arthritis Rheumatol* 2017;**69**(suppl 10).
- 5 Keser G, Direskeneli H, Aksu K. Management of Takayasu arteritis: a systematic review. *Rheumatology* 2014;**53**:793–801.