Docket #: S20-354

Hypersensitivity Associated with IL-1 and IL-6 Inhibitors Links to Common HLA Alleles

Researchers at Stanford and UCSF have discovered a strong association between serious, potentially fatal, delayed hypersensitivity reactions that occur in a subset of patients exposed to IL-1/IL-6 inhibitors and HLA-DRB1*15 alleles that are common across ancestries. Anti-IL-1/6 therapies are commonly used to treat inflammatory conditions and **this finding suggests that HLA testing before prescription, treatment monitoring, and applicable drug safety labeling could improve safety**. Misinterpreted as disease flares, Drug reaction with eosinophilia and systemic symptoms (DRESS), a severe delayed hypersensitivity reaction (DHR), often goes unrecognized in patients with inflammatory illness. Unusual clinical features including severe drug-associated lung disease and rash arising during IL-1 and IL-6 inhibitor treatment of Still's and Still's-like disease across the age spectrum [systemic onset juvenile arthritis (sJIA) and adult onset Stills disease (AOSD)] suggested this serious DHR to the researchers. See publication of Saper and Mellins et al. for more information on their multi-center, retrospective study of a convenience sample of IL-1 or IL-6 inhibitor-exposed cases of Still's and Kawasaki disease.

Stage of Development
Ready for clinical use

Applications

- Identification of at-risk patients
- Safe and effective administration of therapeutics

Advantages

- Screening for risk-associated HLA alleles may help avoid serious adverse reactions, and focus drugs where they will provide the best outcome

Publications

- Saper VE, Ombrello MJ, Tremoulet AH, et al. Severe delayed hypersensitivity reactions to IL-1 and IL-6 inhibitors link to common HLA-DRB1*15 alleles *Annals of the Rheumatic Diseases*. Published Online First: 17 November 2021.

Patents

- Published Application: WO2022174067
- Published Application: 20240093299
- Issued: 12,753,443 (USA)

Innovators

- Vivian Saper
- Elizabeth Mellins
- Jill Hollenbach

Licensing Contact

Eileen Lee

Email