Subject: TOPMed Imputation Panel Released

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From: Michigan Imputation Server

To: Tan, Manuela

TOPMed Imputation Panel

Available on TOPMed Imputation Server

As part of NHLBI's TOPMed Program, a new reference panel is now available to the community on the TOPMed Imputation Server. This new panel is based on 97,256 deeply sequenced human genomes, and improves upon existing imputation panels. To support the release, the Michigan Imputation Server has been ported to a cloud computing environment in work supported by the NHLBI BioData Catalyst program.

As a registered user of the Michigan Imputation Server, we expect that you will be very interested in this new panel, which is based on 194,512 haplotypes and contains 308,107,085 genetic variants. We anticipate that this panel will be used widely throughout the community and become a standard backbone for association analysis.

Below are a few brief notes indicating the quality of this panel compared to the existing 1000 Genome and Haplotype Reference Consortium panels.

For samples of European ancestry, the panel imputes well variants with MAF < 1e-4.

For admixed American samples, the TOPMed panel offers high quality imputation.

African ancestry samples impute low frequency variants well, greatly improving upon existing panels.

For samples of East Asian ancestry, there is some improvement over existing panels. However, there is still room for improvement with future panels (note differing scale).

Existing registrations from the Michigan Imputation Server have not been migrated, so you will need to reregister on this new server. Imputation with 1000 Genome and HRC panels is still supported on the Michigan Imputation

Server.

The TOPMed sequence and imputation panels are described in the BioRvix preprint: Sequencing of 53,831 diverse genomes from the NHLBI TOPMed Program. This resource is built from the efforts of many people, 32 cohorts, and the generous support of NHLBI. Thanks to all for helping make this tremendous resource available to the community.

This is a new resource, so if you see any issues or have questions, please contact us at imputationserver@umich.edu. Follow Michigan Imputation Server on Twitter for further developments.

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