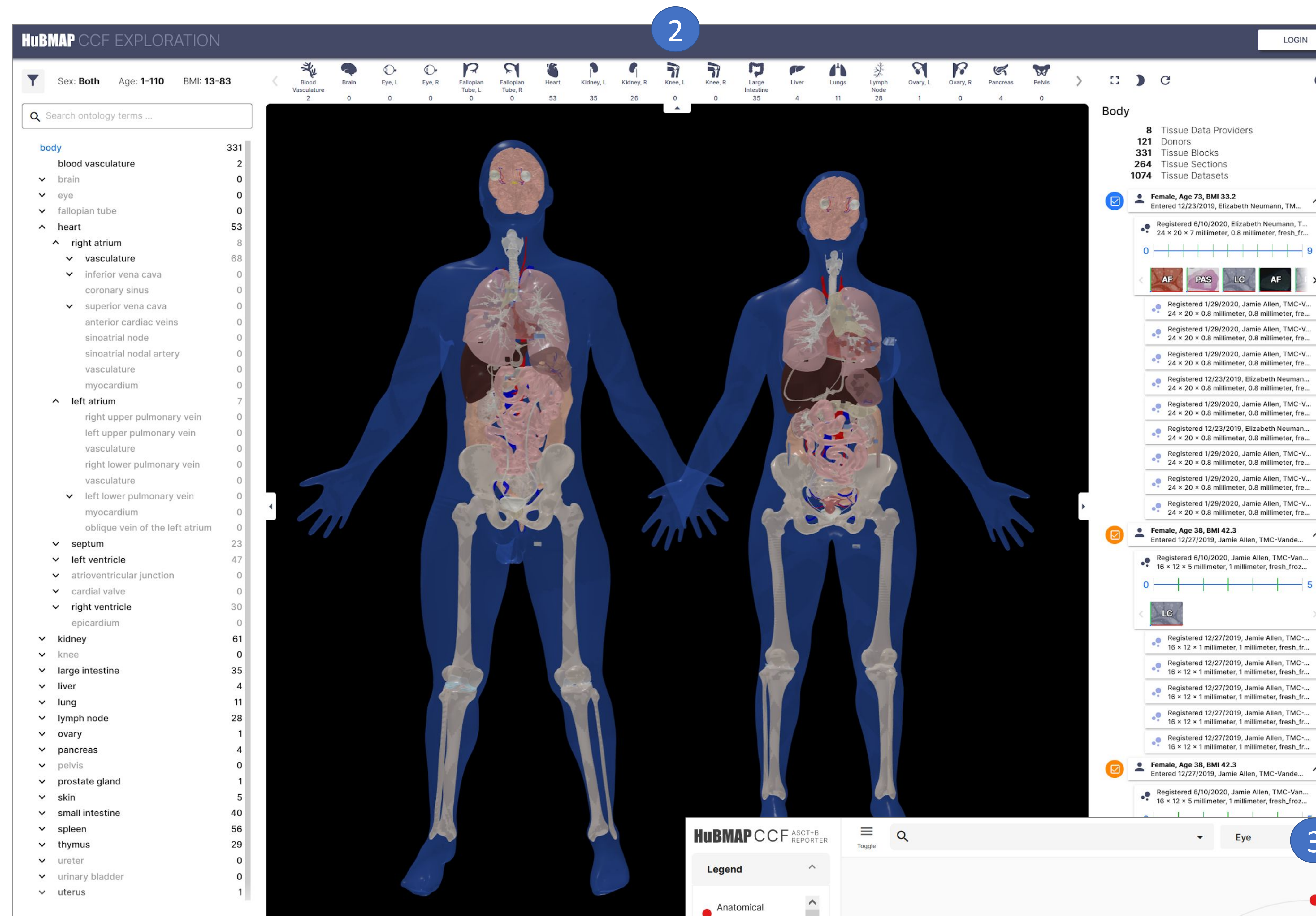


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Abstract

The Human BioMolecular Atlas Program (HuBMAP) aims to create a computable, open Human Reference Atlas (HRA) [1]. This HRA will redefine our understanding of the human body by recovering multi-scale tissue organization from the human body to the single cell resolution. In the initial three years of the project, we created an authoritative ontology of anatomical structures, cell types, and biomarkers; this anatomical structure terminology was then linked to three-dimensional reference objects in the size and shape of human organs, functional tissue units, and anatomical micro-structures [2]. Many of the current 52 reference organs were derived from the Visible Human Project data. An initial subset can be explored at <https://hubmapconsortium.github.io/ccf/pages/ccf-3d-reference-library.html>. The growing collection of 3D reference objects form the basis of tissue data registration via the Registration User interface (RUI), <https://hubmapconsortium.github.io/ccf-ui/rui>. Registered tissue data can be explored across multiple scales and in the context of the atlas via the Exploration User Interface (EUI), <https://portal.hubmapconsortium.org/ccf-eui>. The ASCT+B Reporter (<https://hubmapconsortium.github.io/ccf-asct-reporter>) supports the construction and review of anatomical structures, cell types, and biomarkers tables. All user interfaces can be freely explored at the HuBMAP Portal <https://portal.hubmapconsortium.org/ccf-eui>. The CCF UI code is available at <https://github.com/hubmapconsortium/ccf-ui>. We are in the process of developing standard operating procedures and design style guides for the HuBMAP Reference Object Library. We welcome comments and questions on the evolving atlas and user interfaces from the larger AAA expert community.

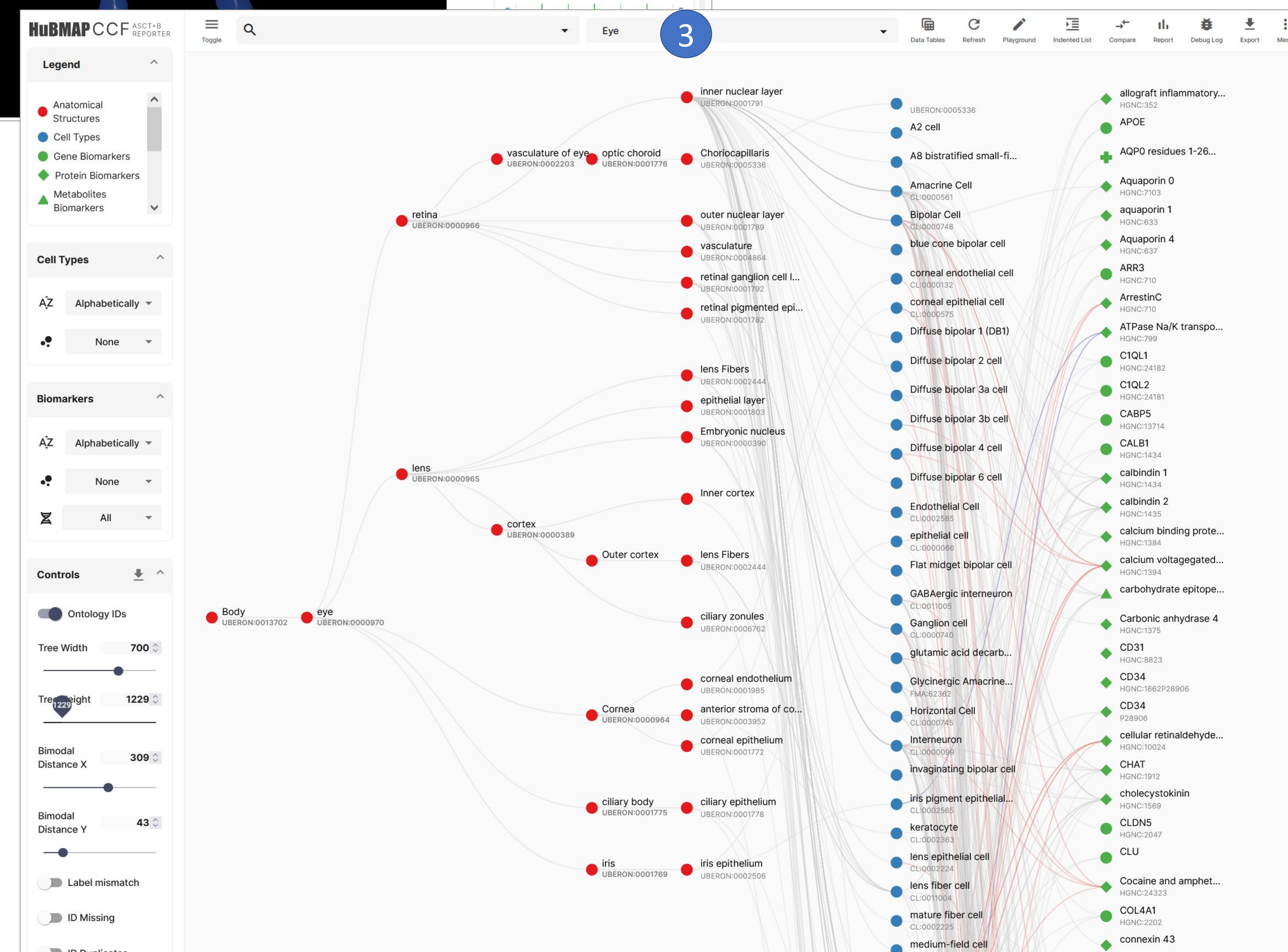
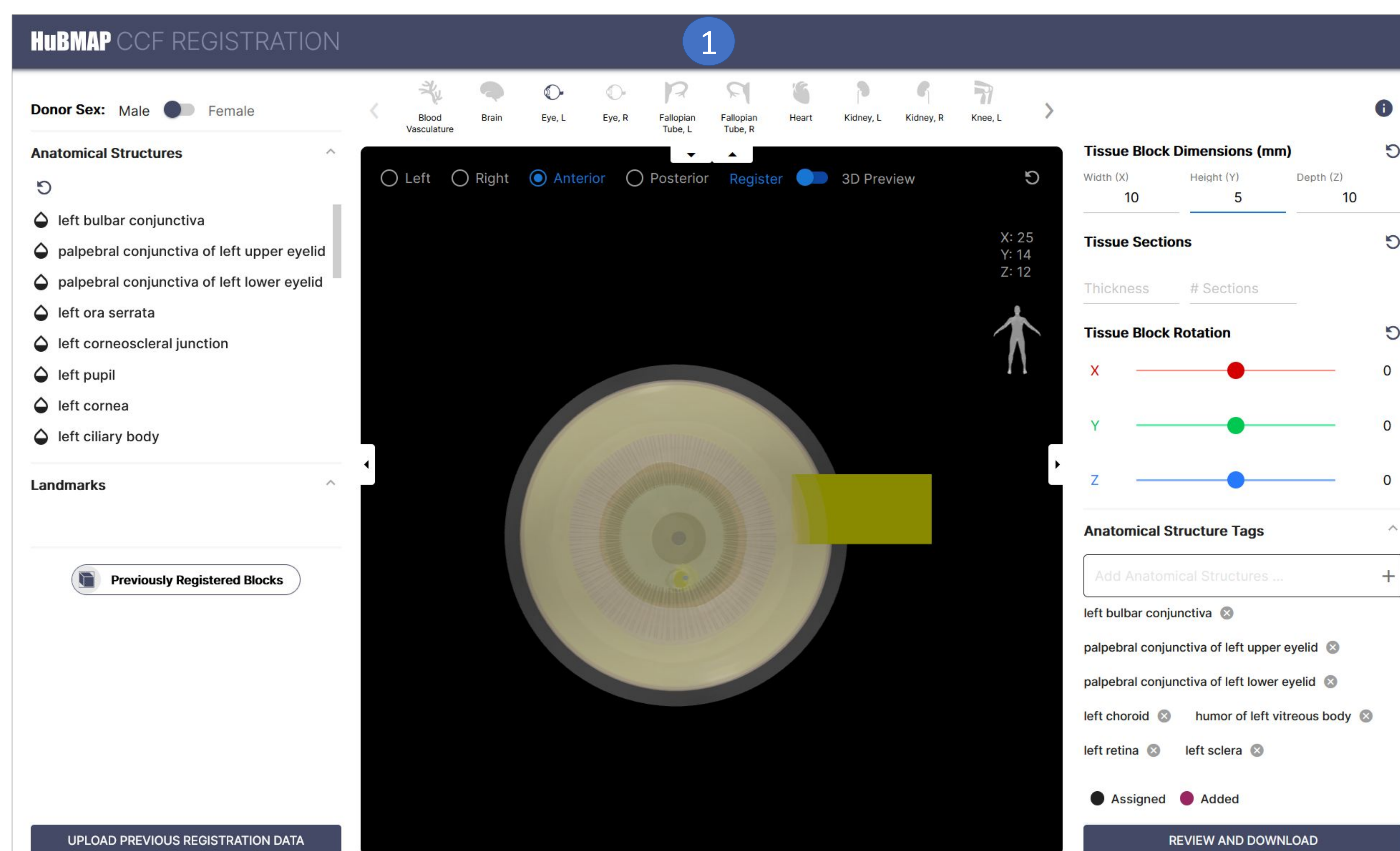


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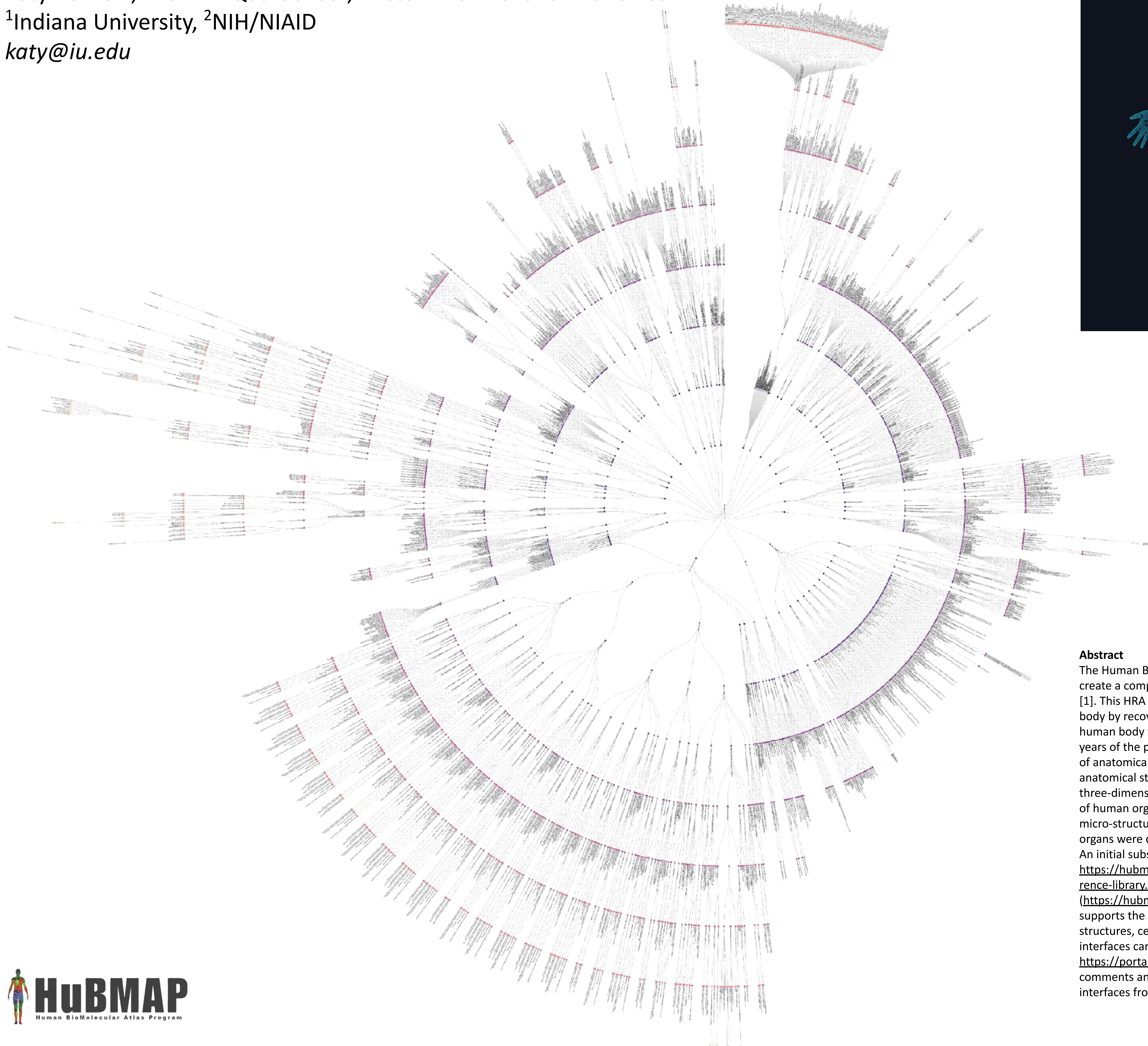
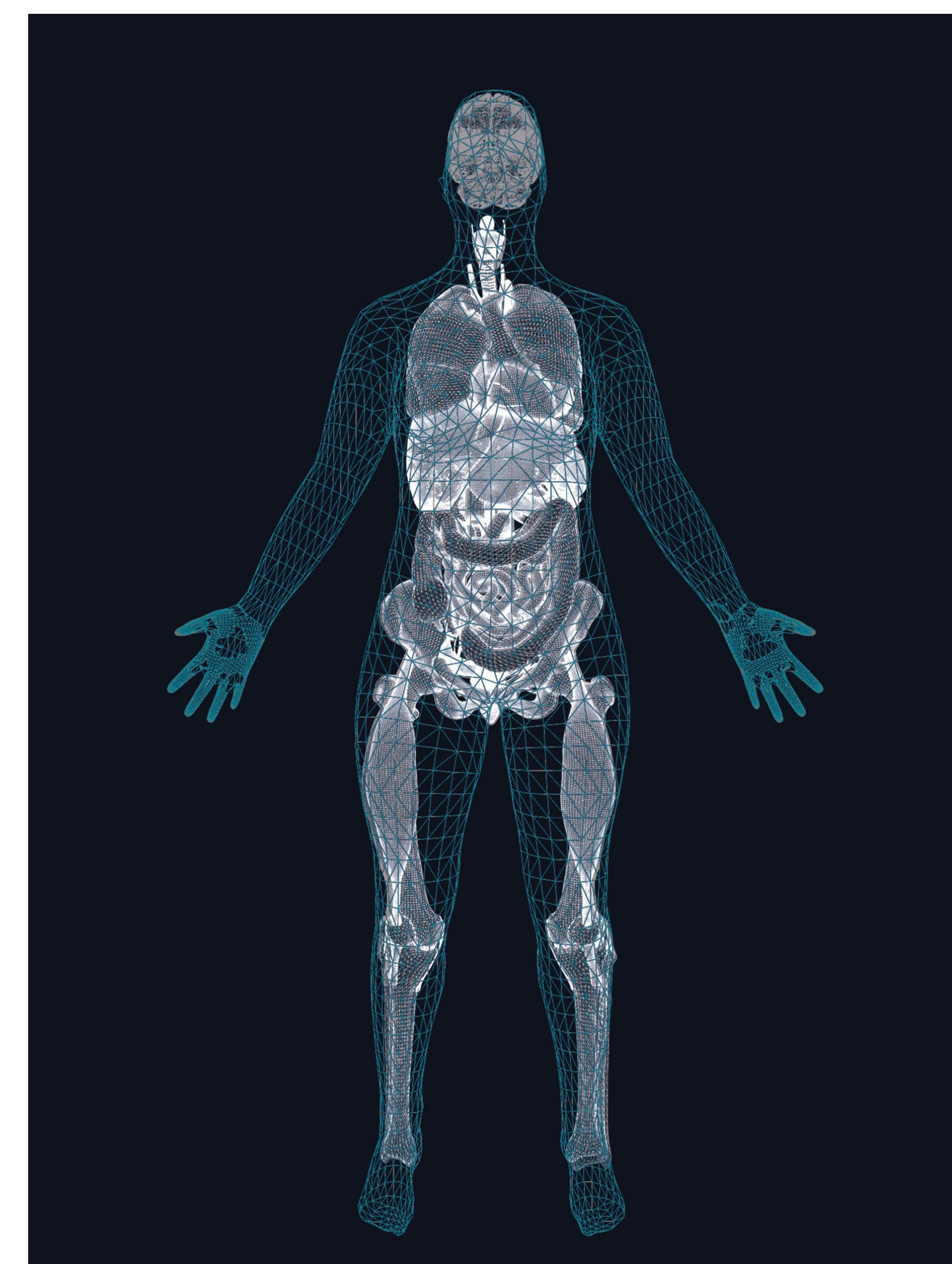


Anatomical Structures Object Library of the Human Reference Atlas

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Abstract

The Human BioMolecular Atlas Program (HuBMAP) aims to create a computable, open Human Reference Atlas (HRA) [1]. This HRA will redefine our understanding of the human body by recovering multi-scale tissue organization from the human body to the single cell resolution. In the initial three years of the project, we created an authoritative ontology of anatomical structures, cell types, and biomarkers; this anatomical structure terminology was then linked to three-dimensional reference objects in the size and shape of human organs, functional tissue units, and anatomical micro-structures [2]. Many of the current 52 reference organs were derived from the Visible Human Project data. An initial subset can be explored at <https://hubmapconsortium.github.io/ccf/pages/ccf-3d-reference-library.html>. The ASCT+B Reporter (<https://hubmapconsortium.github.io/ccf-asct-reporter>) supports the construction and review of anatomical structures, cell types, and biomarkers tables. All user interfaces can be freely explored at the HuBMAP Portal <https://portal.hubmapconsortium.org/ccf-eui>. We welcome comments and questions on the evolving atlas and user interfaces from the larger AAA expert community.