Supplemental Table 1. Pathogenic Variants in other Collagen Disorders

Gene	**Protein**	**Conditions**
COL1A1	Pro-alpha1 type 1 collagen	Osteogenesis imperfecta; Caffey disease; arthrochalasia EDS; rarely classical type EDS; and rarely vascular EDS
COL1A2	Pro-alpha2 type 1 collagen	Osteogenesis imperfecta; cardiac-valvular EDS; arthrochalasia EDS; and rarely classical type EDS
COL5A1	Fibrillar collagen	Classical type Ehlers-Danlos syndrome
COL5A2	Fibrillar collagen	Classical type Ehlers-Danlos syndrome

EDS, Ehlers-Danlos syndrome

Supplemental Table 2. The American College of Medical Genetics Classification System of Genetic Variants*

- **Pathogenic:** A variant that directly contributes to the development of disease. Some pathogenic variants may not be fully penetrant. In the case of recessive or X-linked conditions, a single pathogenic variant may not be sufficient to cause disease.
- **Likely pathogenic**: A variant with a high likelihood (> 90% certainty) of causing disease. While additional evidence is expected to confirm pathogenicity, there remains a small chance that new evidence may demonstrate that the variant does not have clinical significance.
- **Variant of uncertain significance (VUS)**: There is not enough information at this time to support a more definitive classification of the variant.
- **Likely benign**: A variant that is not expected to have a major effect on disease (>90% certainty). Additional evidence is expected to confirm this assertion, but one cannot entirely exclude the possibility that new evidence may demonstrate that this variant can contribute to disease.
- **Benign**: A variant that does not cause disease.

There are also further rules and criteria for classifying of pathogenic or likely pathogenic variants as well as criteria to classify benign or likely benign variants. (*Richards S, et al. Standards and Guidelines for the Interpretation of Sequence Variants: A Joint Consensus Recommendation of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology. Genet Med. 2015;17:405–424).