Variants are changes in the DNA whose phenotypic effects may or may not be definitively understood. Because variant interpretation is a complex process, sources sometimes disagree on the classification of a variant, which is called a variant discrepancy. This study aimed to determine the practice of genetic counselors regarding variant discrepancies and to identify the barriers to counseling a variant discrepancy in hereditary cancer genetic testing. This investigation was unique because it was the first to address variant discrepancies from a clinical point of view. An electronic survey was sent to genetic counselors in the NSGC Cancer Special Interest Group. The vast majority of counselors (93%) had seen a variant discrepancy in practice. The most commonly selected barriers to counseling a variant discrepancy were lack of data sharing (90%) and lack of a central database (76%). Most counselors responded that the ideal database would be owned by a non-profit (59%) and obtain information directly from laboratories (91%). When asked how they approached counseling sessions involving variant discrepancies, the free responses emphasized that counselors consider family history and psychosocial concerns, showing that genetic counselors tailored the session to each individual. Variant discrepancies are an ongoing concern for clinical cancer genetic counselors, as demonstrated by the fact that counselors desired further resources to aid in addressing variant discrepancies, including a centralized database (89%), guidelines from a major organization (88%), continuing education about the issue (74%) and functional studies (58%).

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