Optimal Genetic Testing for Families

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Abstract

The rise of accessible genetic testing due to a precipitous drop in the gene-sequencing cost has paved the way for precision medicine. The goal is to make matching a cancer cure or prevention to our genetic code as easy as matching a blood transfusion to a blood type. The nation’s leading hospitals, such as the Mayo Clinic, Massachusetts General Hospital, and the UCSF Medical Center, all rolled out their genomic sequencing programs for the healthy. One central question remains unanswered: who should be tested, and at what price point? In this talk, we will introduce a framework to decide the optimal strategy for genetic testing, using patients' family information. This framework will also allow us to put existing clinical decision rules into perspective and compare them with each other.