

## **Supplementary Materials**

chr4-54727437-T-C (KIT: p.W557R) chr4-54727437-T-A (KIT: p.W557R)

ACMG Classification

**Pathogenic**

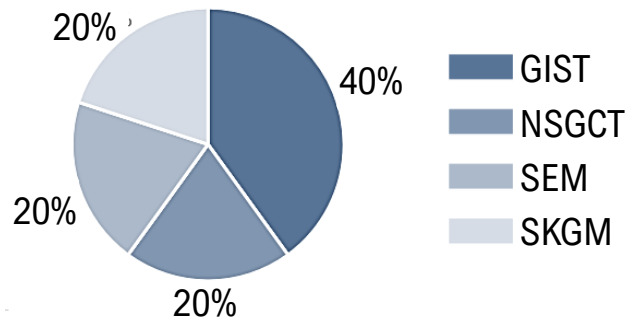
21 points = 21 P - 0 B

ClinVar **Pathogenic**

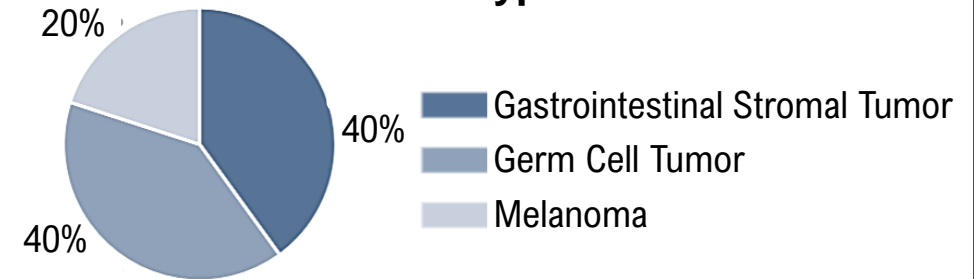
★★★★

Submissions: 5

**Oncotree code**



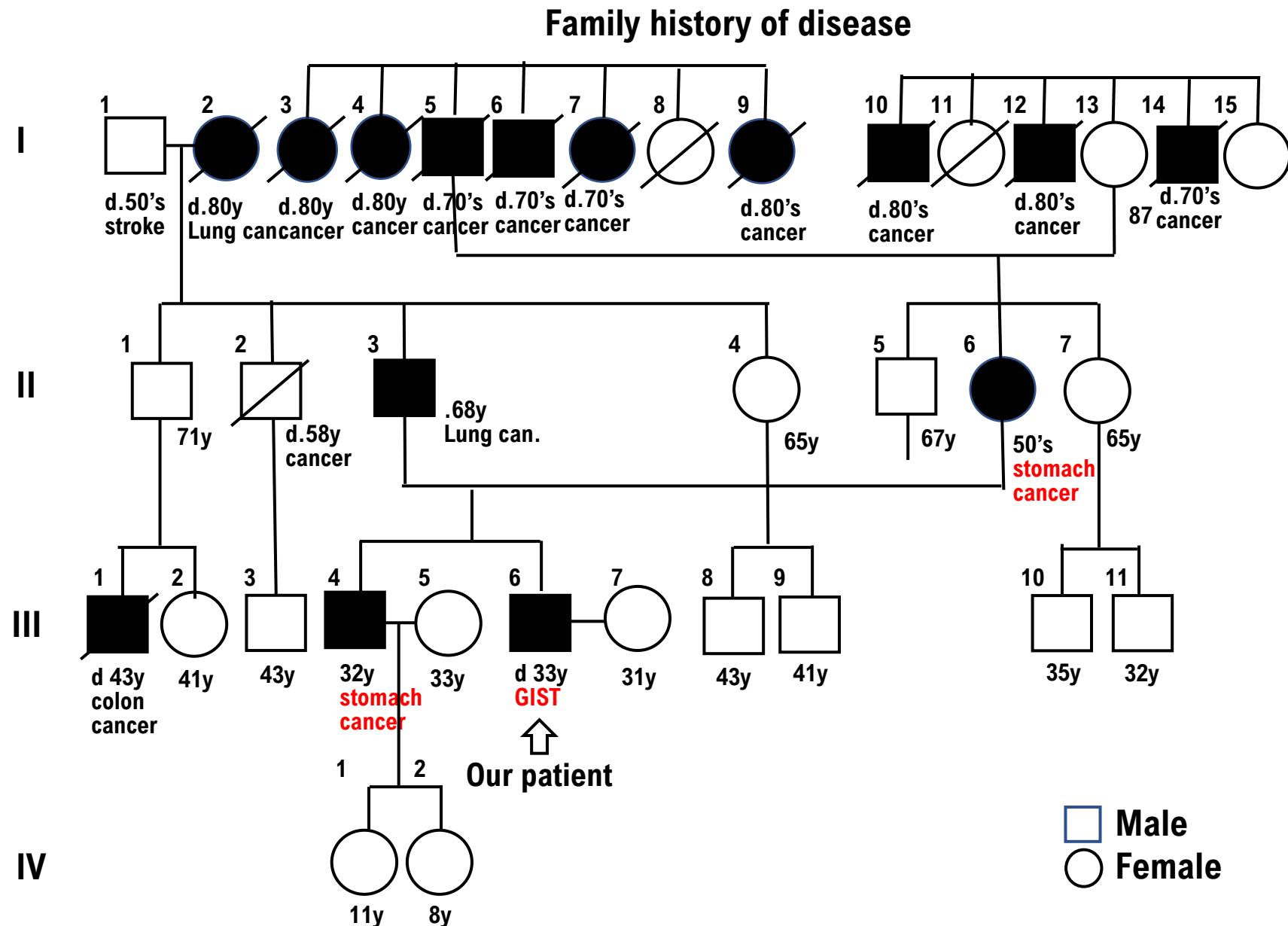
**Cancer type**



*KIT* (W557R) : allele-fraction = 0.5798

ACGM; American College of Medical Genetics and Genomics, GIST; GastrointestinalStromalTumor, NSGCT; non-seminomatous germ cell tumor, SEM; seminoma, SKGM; Shenkang granule

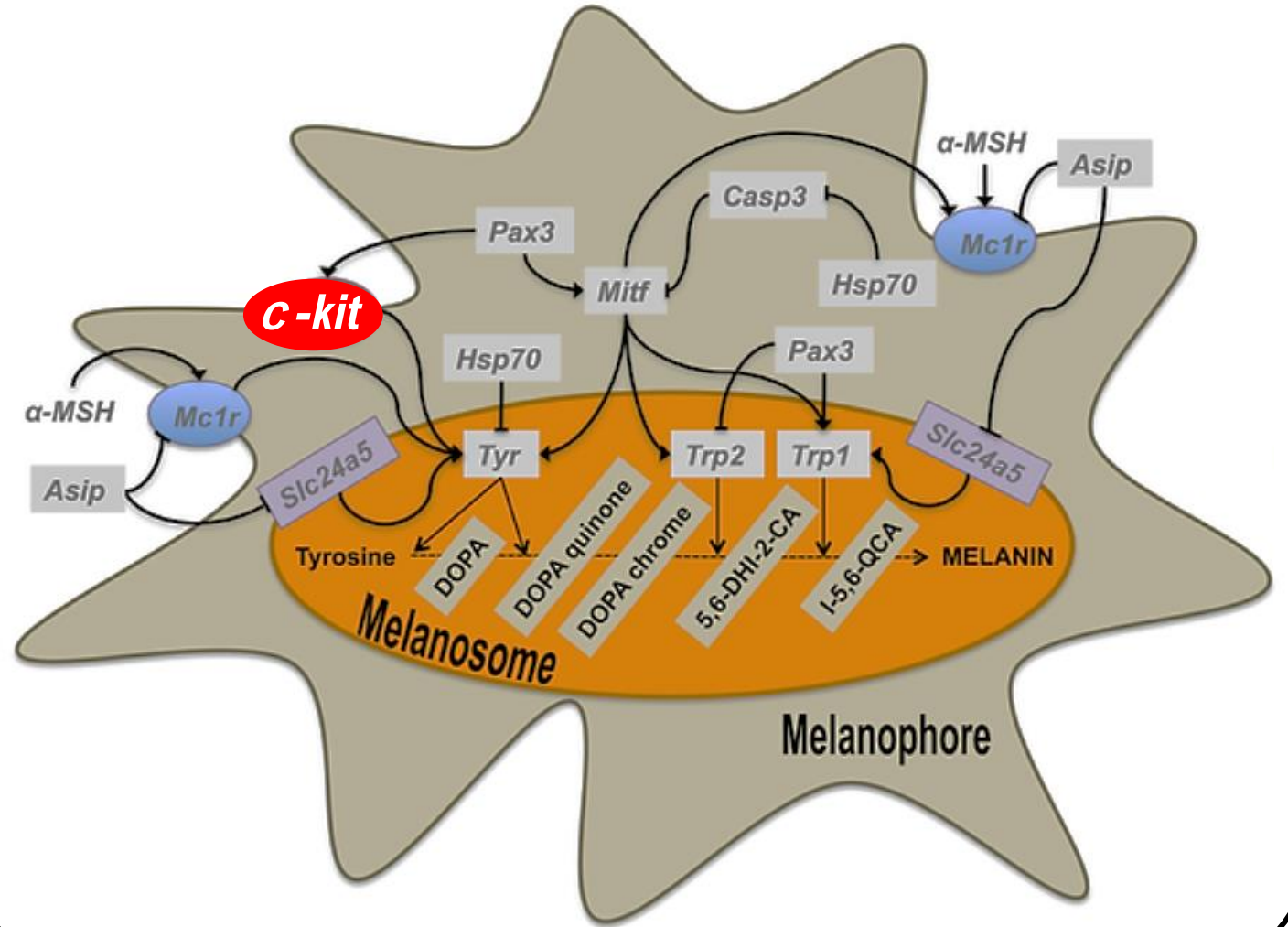
**Figure S1.** FoundationOne® CDx tissue revealed a pathogenic variant (W557R) located within exon 11 of *KIT* (allele-fraction = 0.5798), and the results were verified using the ClinVar human genome database.



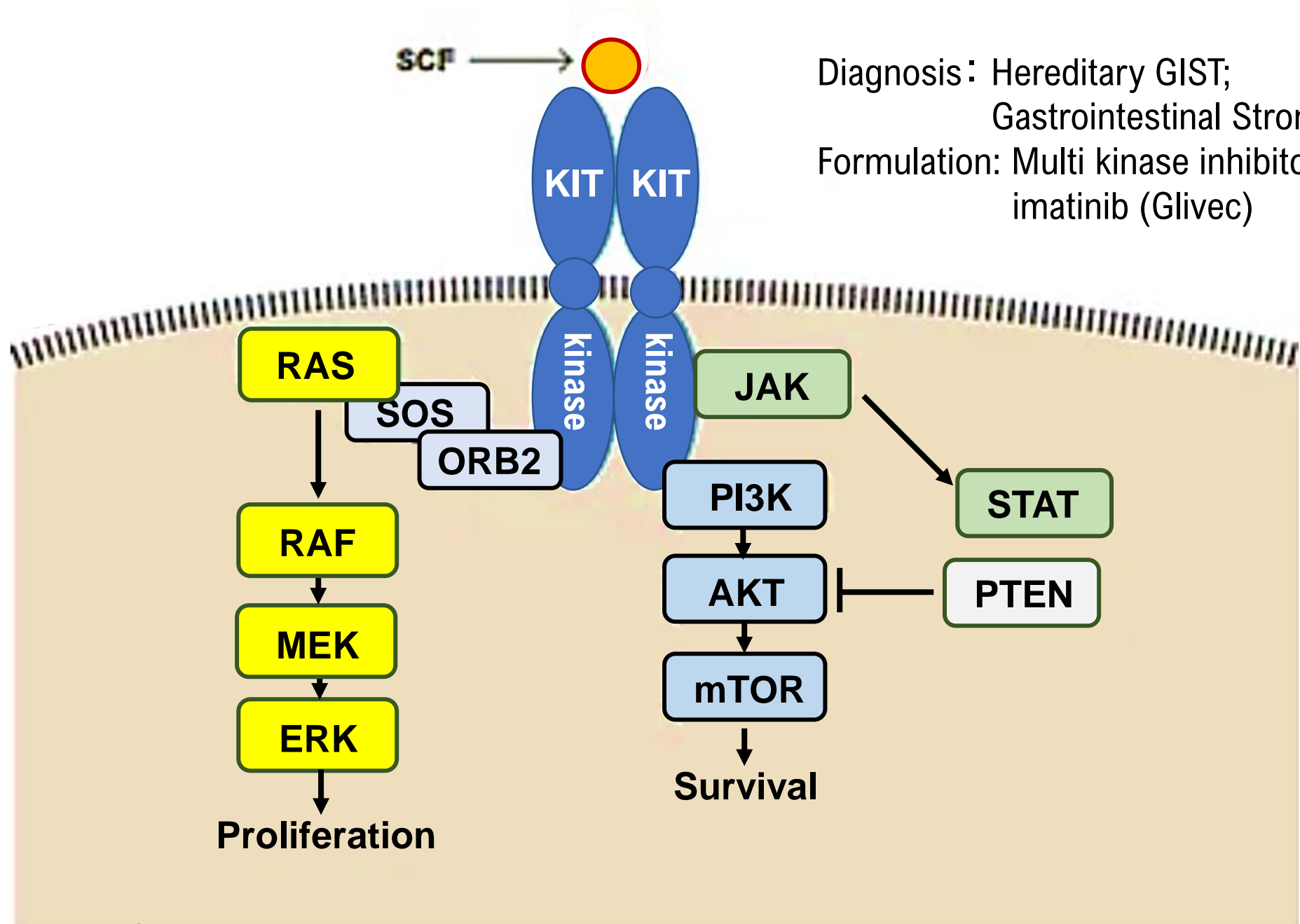
**Figure S2.** The patient was diagnosed with familial multinodular GIST based on his clinical findings and familial history of cancer.



## c-Kit activation is required for Melanogenesis



**Figure S3.** c-Kit activation is required for Melanogenesis.



Diagnosis: Hereditary GIST;  
Gastrointestinal Stromal Tumor  
Formulation: Multi kinase inhibitor  
imatinib (Glivec)

**Figure S4.** KIT signaling pathway.