



14 families with a sporadic case of CHD



16 families with a history of CHD

10%

33%

57%



1 family (7%)
PTPN11



2 families (13%)
TBX5, TFAP2B

Causal genetic variants

in genes known to cause CHD were present
(hcCHD gene list)



Course of action:

- Personalized counseling for family members. Explanation of recurrence risk for family planning
- Examination of all mutation-positive family members for associated conditions (e.g. conduction defects, cardiomyopathies)



3 families (21%)
PBX1, CNOT1, ZFP36L2



7 families (44%)
*KDM5A + KMT2C, TIE1, UPF2,
USP34, FLT4, TEK, TEAD2*

Likely causal variants

in genes with supportive evidence in the literature



Course of action:

- Obtain DNA from additional family members and screen for causal mutations
- Functional analysis of target genes (functional assays, animal models)
- Genome sequencing if predicted pathogenicity not confirmed functionally



10 families (71%)



7 families (44%)

No causal gene variants
were present



Course of action:

- Genome sequencing, extend screening to non-coding regions and copy number variations