Hearing Loss and Connexin 26

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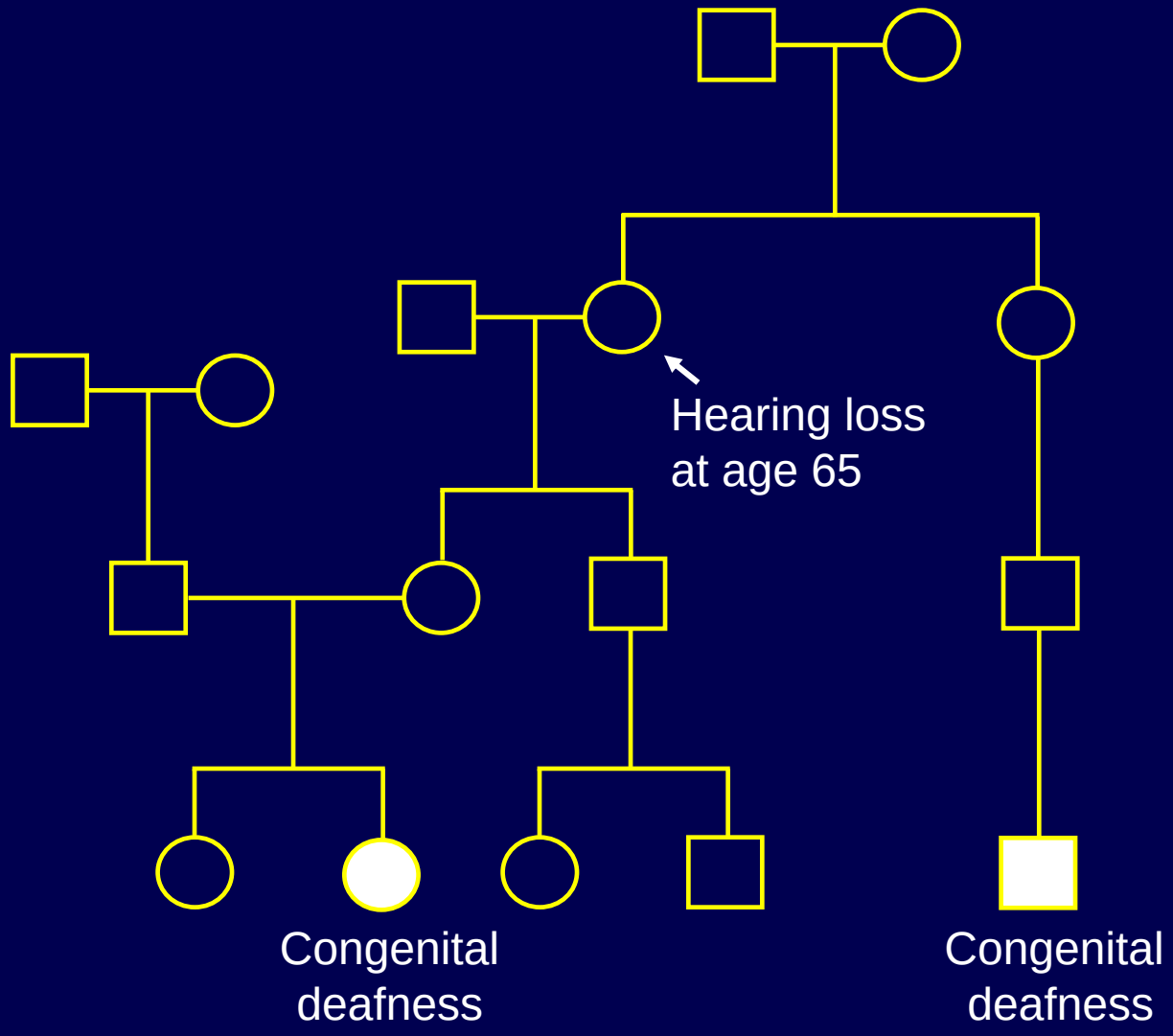
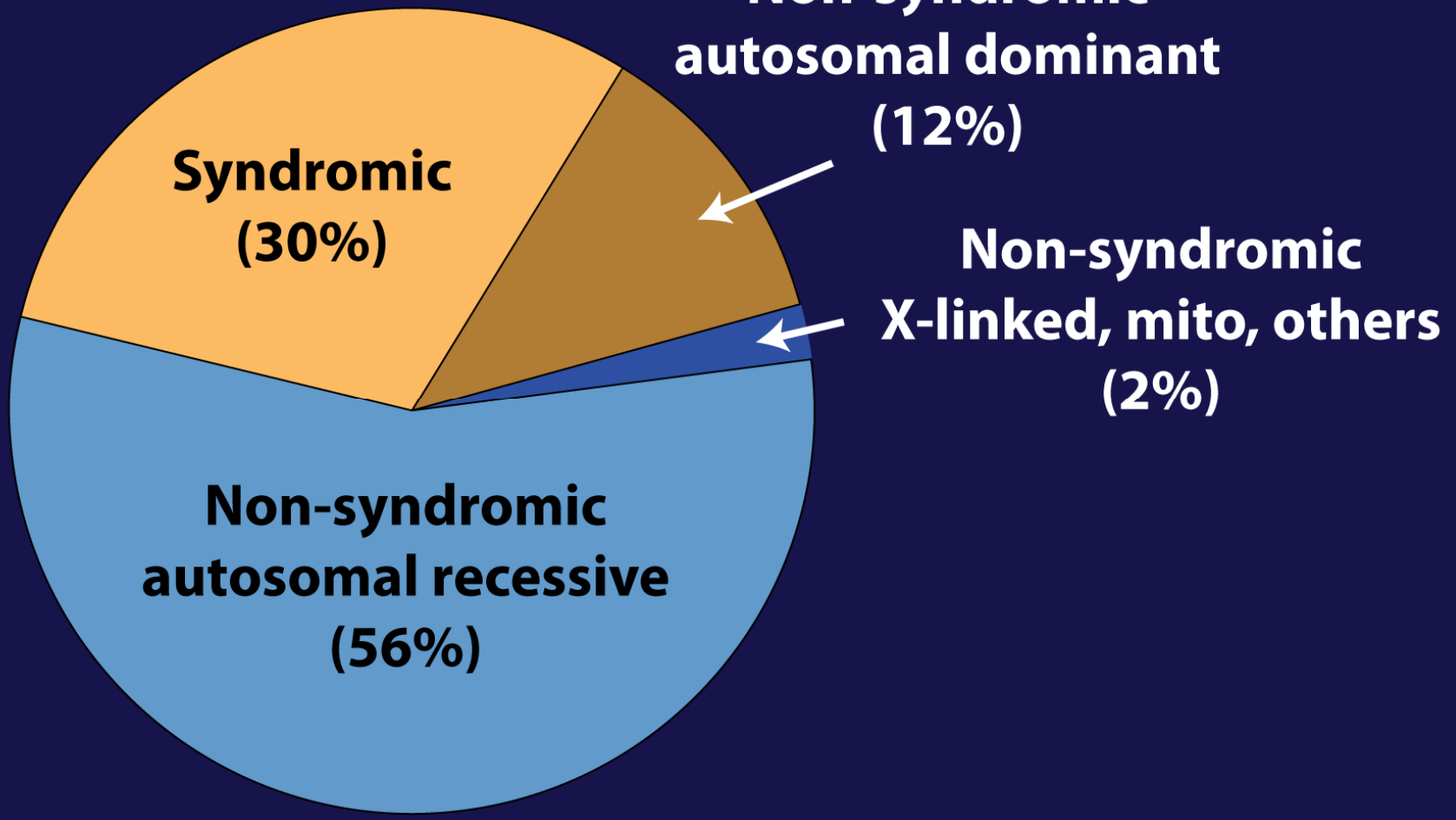
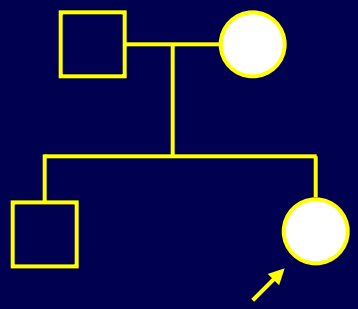
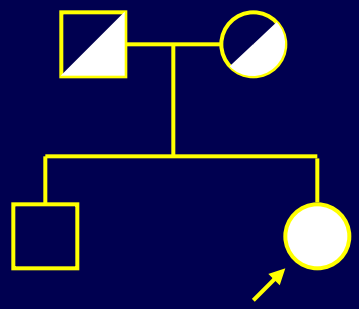

Hearing loss
at age 65
Congenital
deafness
Congenital
deafness

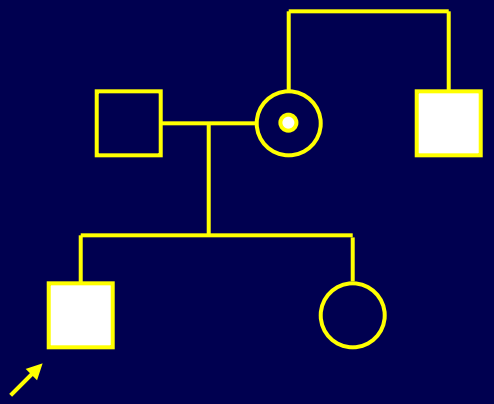

Non-syndromic
autosomal dominant
(12%)
Syndromic
(30%)
Non-syndromic
X-linked, mito, others
(2%)
Non-syndromic
autosomal recessive
(56%)



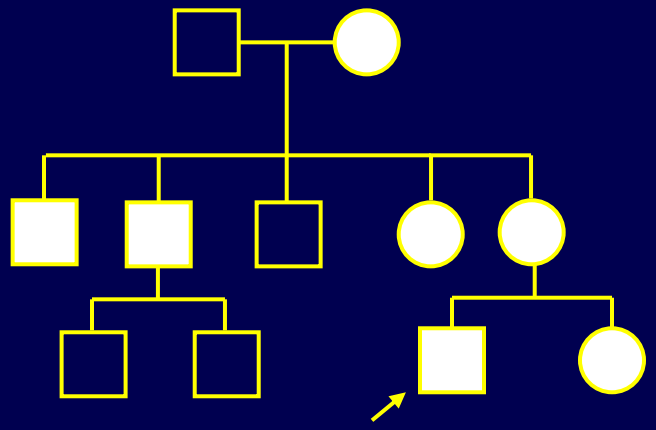
Autosomal Dominant



Autosomal Recessive

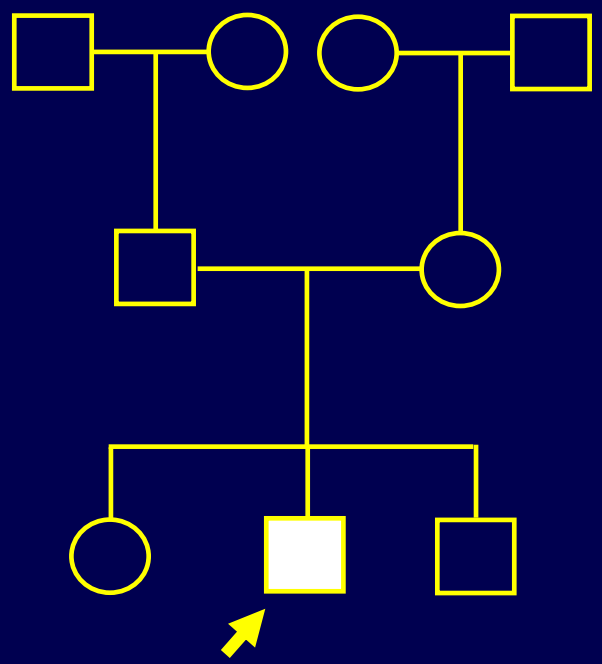


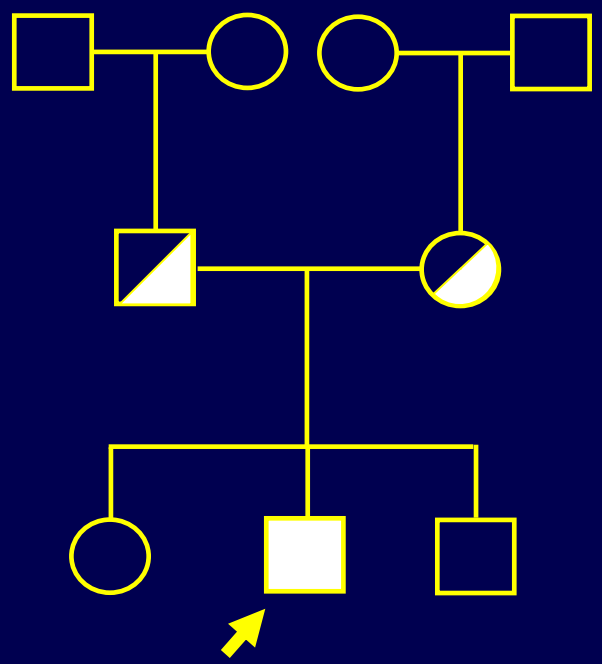
X-linked

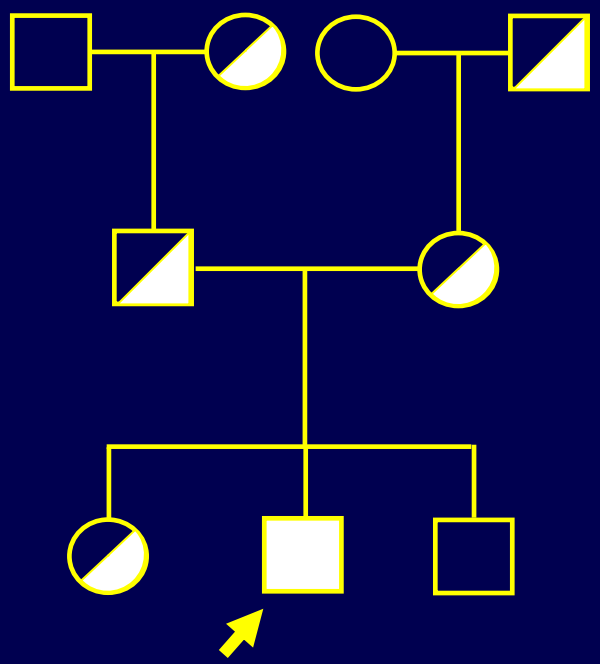


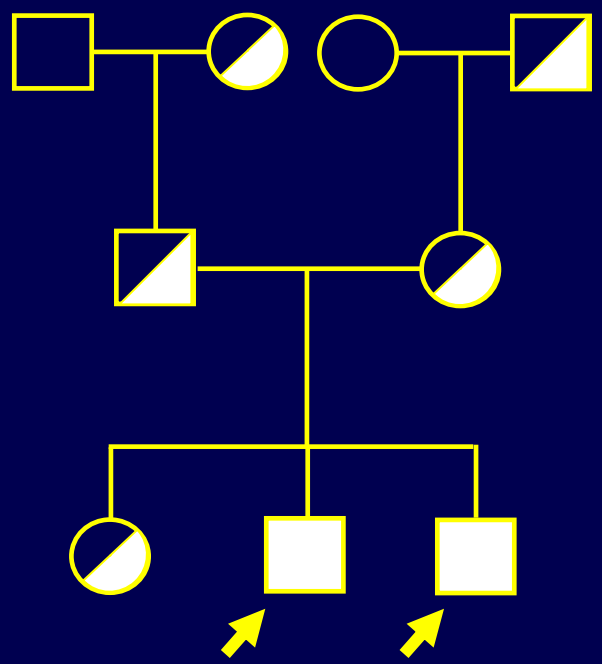
Mitochondrial

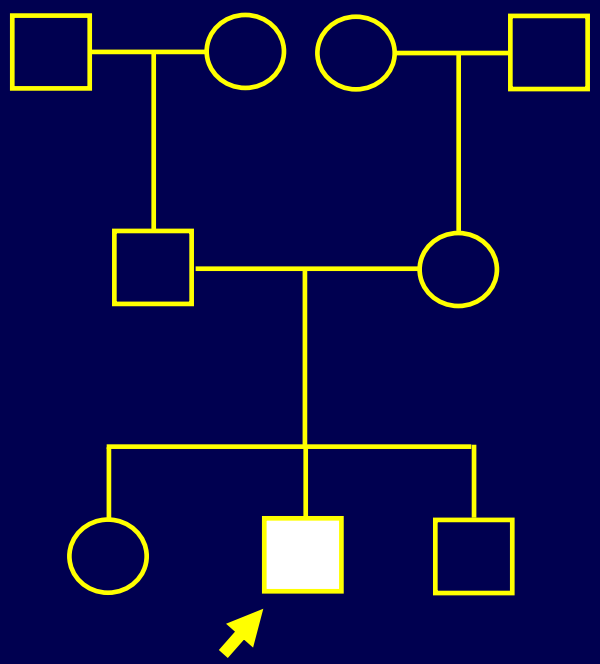
Autosomal Recessive Inheritance





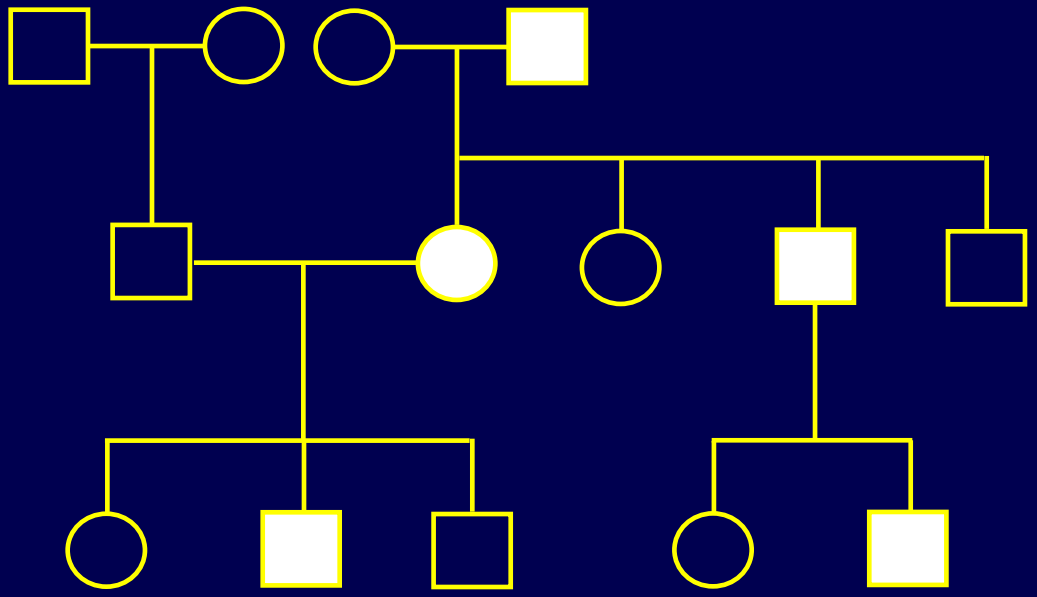






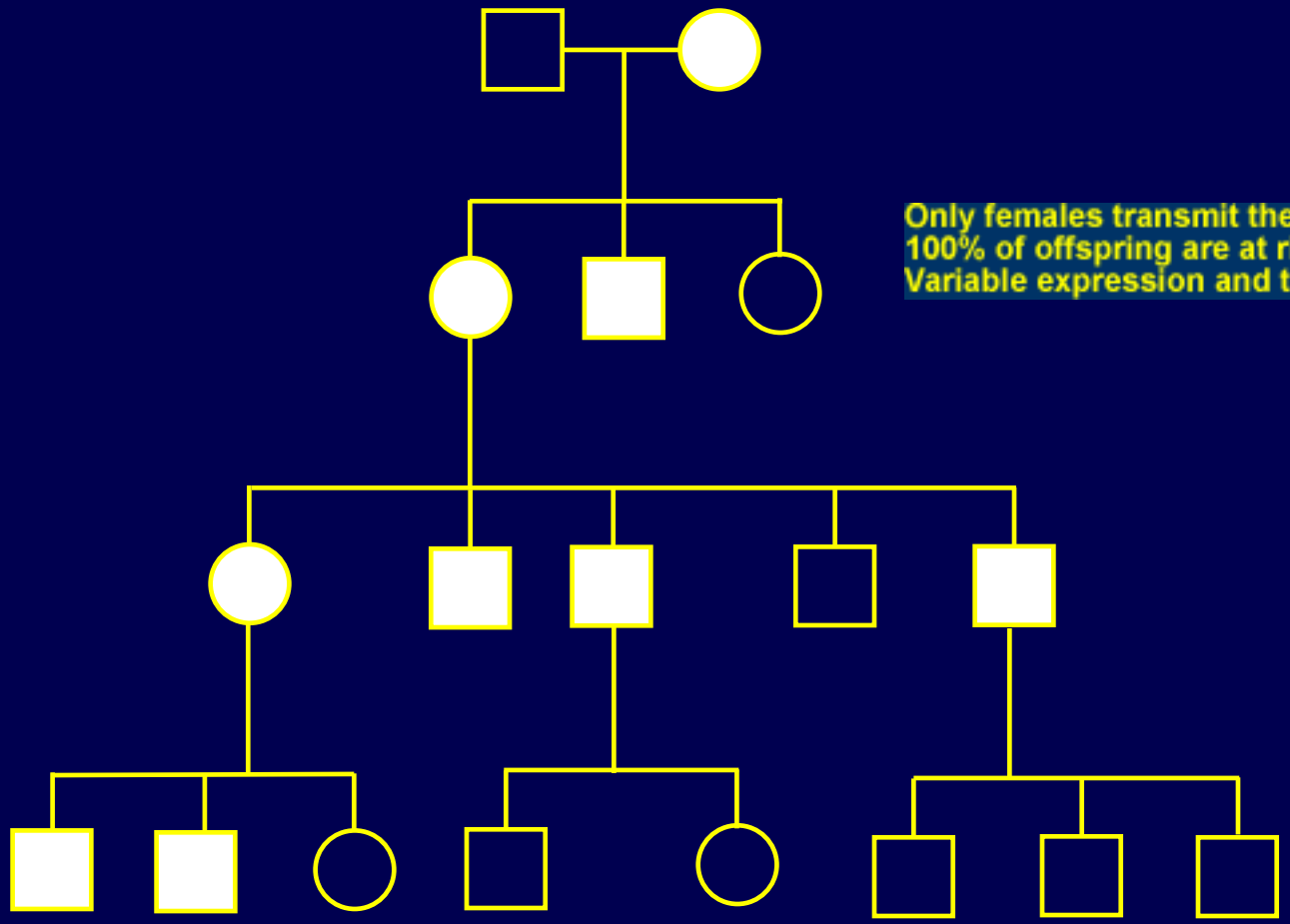
25% risk for each child to inherit disorder
Carrier parents are asymptomatic
Equal sex distribution

Autosomal Dominant Inheritance



- 50% risk for each child to inherit disorder
- Equal sex distribution
- Carrier parent is usually affected with the disorder

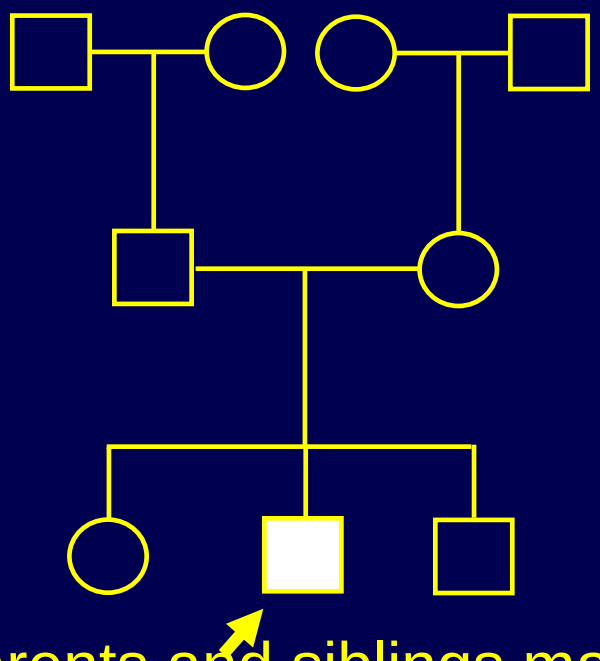
Mitochondrial Inheritance



Only females transmit the disorder
100% of offspring are at risk to show the disor
Variable expression and time of onset

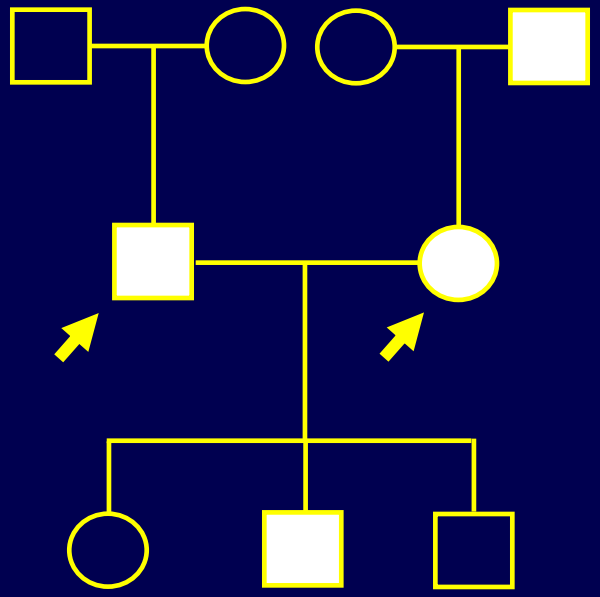
Complex Inheritance

Multifactorial In heritance

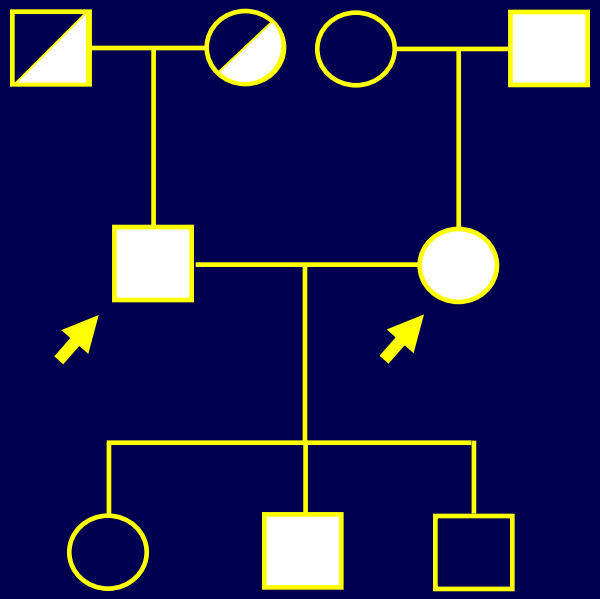


- Parents and siblings may not be affected
- Low sibling recurrence risk (3-10%)

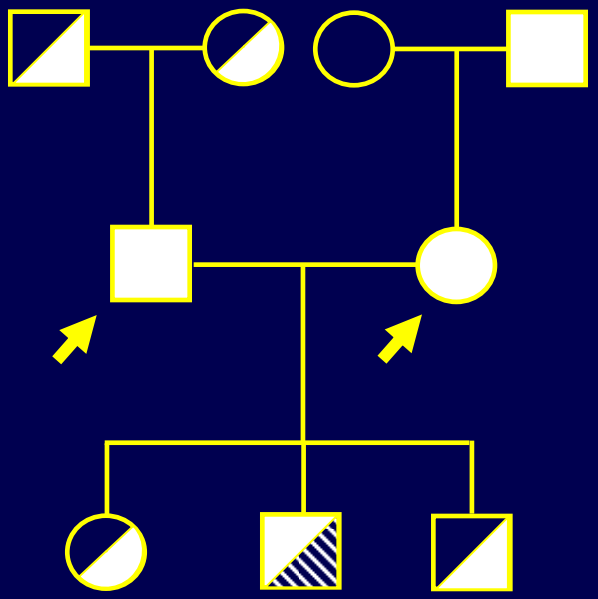
Mother and father have deafness

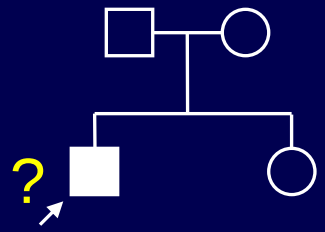


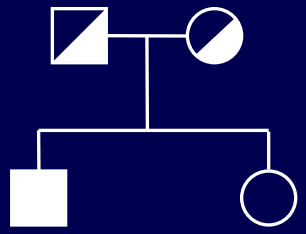
Mother and father have deafness



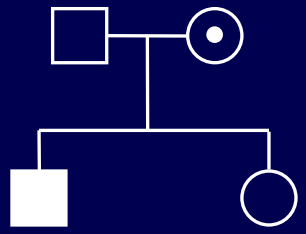
Mother and father have deafness



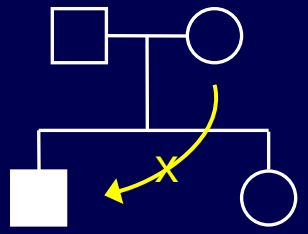




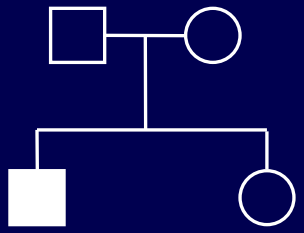
Autosomal Recessive
25% risk



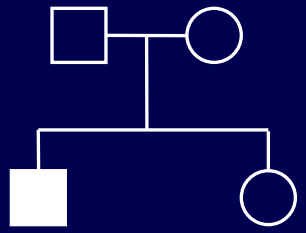
X-linked Recessive
25% risk



Autosomal Dominant
Spontaneous mutation
0% increased risk



Mitochondrial
asymptomatic mother
as high as 100% risk



Autosomal Dominant
asymptomatic mother
as high as 50% risk