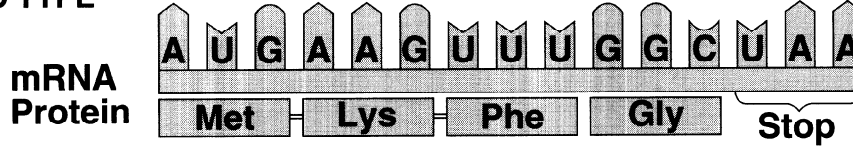


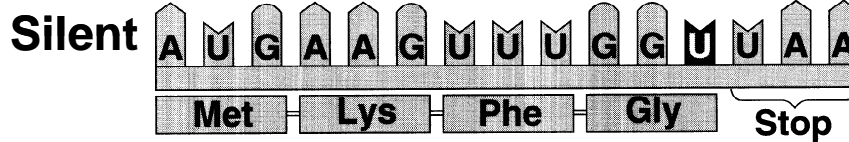
**Figure 16.23 Categories and consequences of point mutations**

**WILD TYPE**

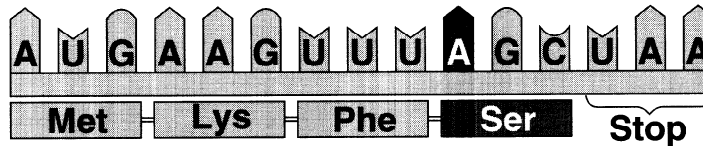


**BASE-PAIR SUBSTITUTION**

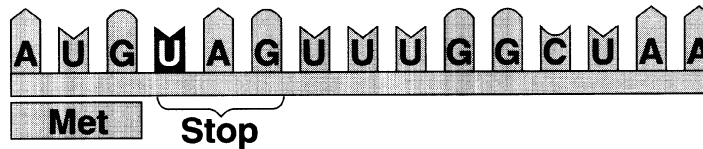
No effect on amino acid sequence



**Missense**

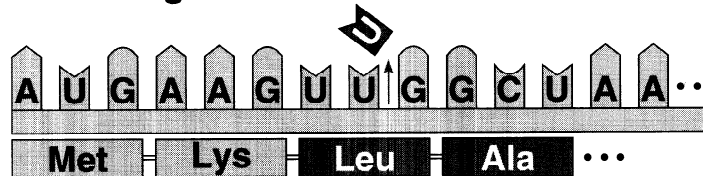


**Nonsense**

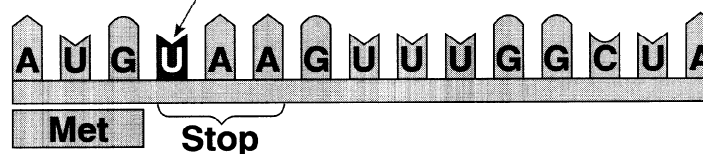


**BASE-PAIR INSERTION OR DELETION**

Frameshift causing extensive missense



Frameshift causing immediate nonsense



Insertion or deletion of 3 nucleotides:  
no extensive frameshift

