Name: _____ **Date:** _____ Code _____

Heart valve replacement option	Constructed from…?	Lifetime of valve?	Does the valve cause blood clotting? (Y/N)	Summary of advantages / disadvantages
Mechanical valve	*Alloys, silicone, pyrolitic carbon, polyester*	*Designed to last a lifetime*	*Yes*	***Pro:*** *These valves last much longer than prosthetic valve.* ***Con:*** *The valve can cause clotting meaning that the patient must take "anti-coagulant" medication. Backflow of blood can be an issue.*
Bioprosthetic / prosthetic valve	*Human or animal tissue*	*10-15 years*	*No*	***Pro:*** *Using a natural material for the valve makes blood clotting unlikely.* ***Con:*** *Valve needs to be replaced every 10-15 years.*

Follow-up questions:

1) Would you recommend a mechanical or prosthetic heart valve replacement to a 45-year-old patient?

   The 45-year-old should probably receive the mechanical heart valve, even though he/she will need to take anti-coagulant medication, because a prosthetic valve would need to be replaced multiple times during the rest of the patient's life, assuming the patient lives to be 80 or 90-years-old.

2) What type of value would you recommend to a 93-year-old patient?

   The 93-year-old patient should receive a prosthetic heart valve because the body more readily accepts natural tissue over artificial materials, meaning that the risk of blood clots is minimal and anti-coagulant medication is not needed. Furthermore, prosthetic valves typically prevent blood backflow better than mechanical valves.