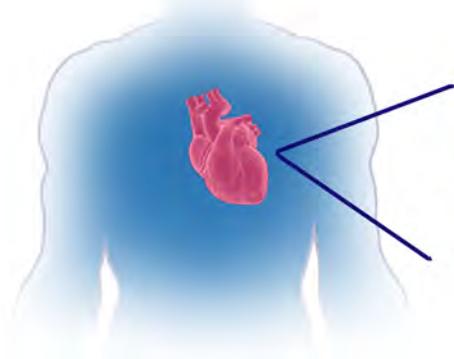
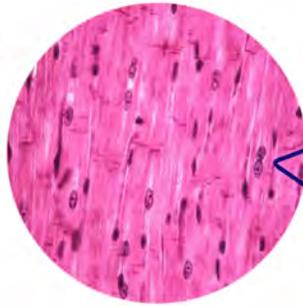


Using DNA Sequencing to Monitor Organ Transplant Rejection

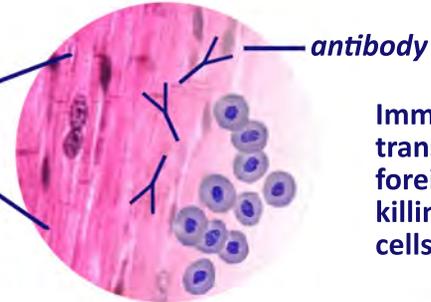
1. Heart transplant



2. Heart muscle cells

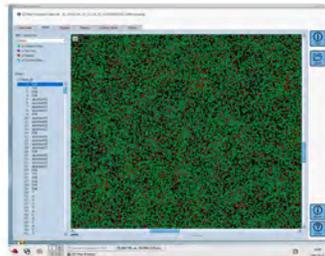


3. Close up of heart muscle cells

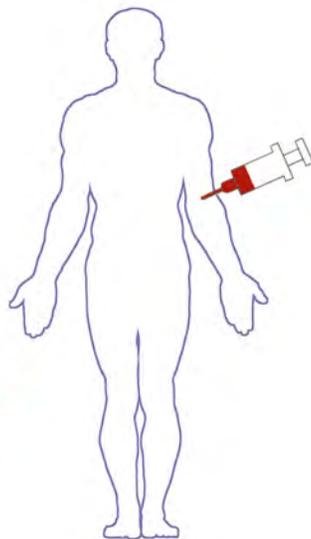


Immune cells perceive transplanted heart as foreign and attack, killing individual heart cells.

7. If foreign DNA exceeds 2% of all DNA in the blood, indicating rejection has begun, then the doctor may increase medications used to suppress the immune system and prevent rejection.

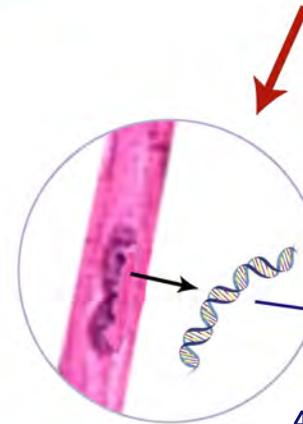


— DNA sequencer



5. Physicians monitoring the patient take a blood sample to test for foreign DNA.

6. All DNA in the blood sample is purified and sequenced to detect percentage of foreign DNA.



4. Transplanted heart cells die, releasing their DNA into the blood stream.