TYPES OF CABG AND
ROLE OF EXTRACORPOREAL
CIRCULATION

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CABG (CORONARY ARTERY BYPASS GRAFTING.)

- Bypass a narrowing in coronary artery.
EXTRACORPOREAL CIRCULATION

- Blood is taken from a patient’s circulation to have a process applied to it before it is returned to the circulation.
  - Hemodialysis.
  - Extracorporeal membrane oxygenation (ECMO)
  - Cardiopulmonary Bypass (CPB)
TYPES OF CABG

• Static (On Pump/Conventional)

• Beating (Off pump).

• Mid CABG. (Minimally Invasive)
STATIC (CONVENTIONAL CABG)

• Median Sternotomy.

• Conduit (Vein/Arteries) harvesting.

• Heart Lung Machine.

• Stopping the heart.

• Anastomosing the conduits with Coronaries and Aorta.

• Heart starts beating.

• Closure
CONDUIT HARVESTING.

- Great saphenous vein.
- Internal mammary artery.
- Radial artery.
- Gastroepiploic artery.
HEART LUNG MACHINE
STOPPING THE HEART (CARDIOPLEGIA)

- Clamp applied between aortic cannula and cardioplegia cannula.
- Potassium rich solution given to arrest the heart in diastole.
- Through ascending aorta.
- Through coronary sinus.
BEATING HEART (OFF PUMP)

- Median sternotomy.
- Conduit harvesting.
- Heart stabilized with stabilizers.
- Intracoronary shunts.
- Anastomosis.
- Closure.
MINIMALLY INVASIVE DIRECT CORONARY ARTERY BYPASS (MIDCAB)

- Thoracotomy not sternotomy.
- Beating heart surgery.
- One or two vessels.
- Faster recovery.
- Fewer complications.
- Less pain.
Thank you!