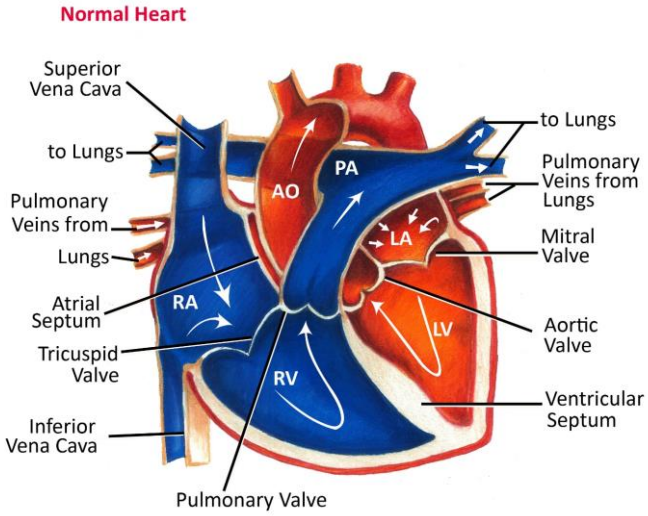
3 Series Respiratory System



1. Which is carrying o_2 blood from lungs to heart?
   Answer: pulmonary vein

2. Which is carrying Do_2 blood from heart to lungs?
   Answer: pulmonary artery

3. Bicuspid valve situated in which location?
   Answer: between LA to LV

4. Which chamber is having most muscular, largest, strongest chamber in heart?
   Answer: left ventricle
   {Because this chamber is pumping blood to all over the body that's why it is situated like that?}

Upper respiratory parts?

URT composed of the nose, the pharynx, and the larynx the organs of the upper respiratory that are located outside the chest cavity.

- ➔ Nasal cavity – inside the nose, the sticky mucous membrane ling the nasal cavity traps dust particles, and tiny hairs called cilia help move them to the nose to be sneezed or blown out
- ➔ Sinuses - these air filled spaces alongside the nose help make the skull lighter
- ➔ Pharynx – both food and air pass through the pharynx before reaching their appropriate destinations. The pharynx also plays a role in speech
- ➔ Larynx – the larynx is essential to human speech

Lower respiratory tract parts?

LRT composed of the trachea, the lungs and all segments of the bronchial tree (including alveoli) the organs of the lower respiratory tract are located the chest cavity

- ➔ Trachea – located just below the larynx the trachea is the main airway to the lungs
- ➔ Lungs - together the lungs from one of the body's largest organs they've responsible for providing oxygen to capillaries and exhaling cabondioxide
- ➔ Bronchi – the bronchi from the trachea into each lungs and create the network of intricate passages that supply the lungs with air
- ➔ Diaphragm – the diaphragm is the main respiratory muscle that contracts and relaxes to allow air into the lungs

CABG: (Coronary Artery Bypass Grafting)

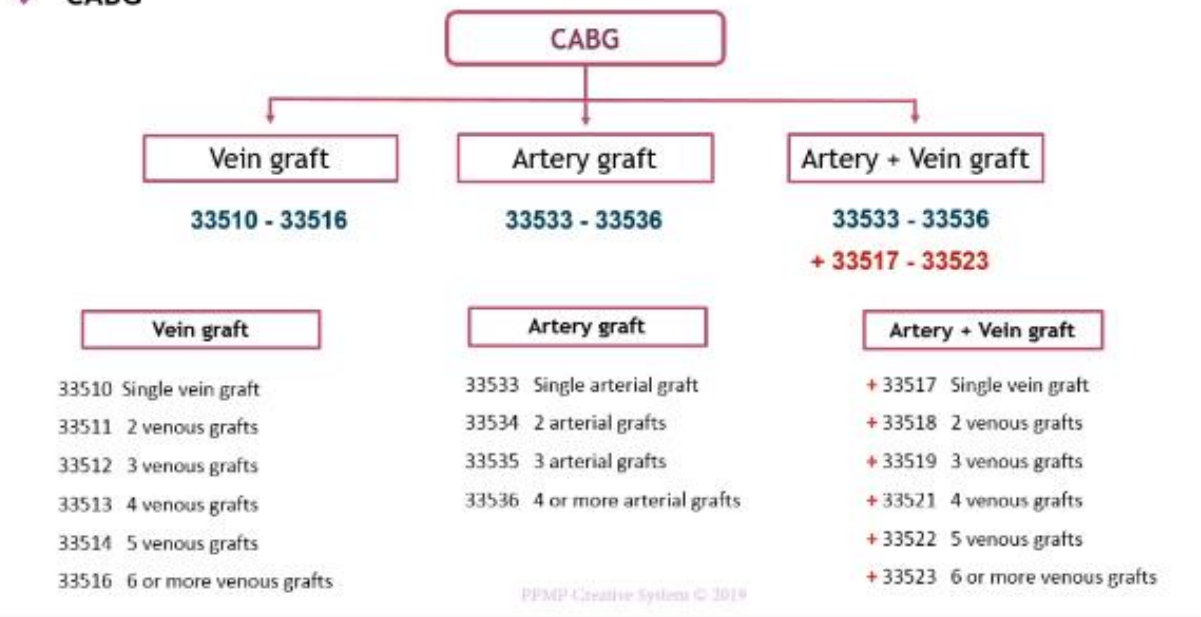
❖ **CABG**

Coronary artery bypass surgery, also known as coronary artery bypass graft surgery, and colloquially heart bypass or bypass surgery, is a surgical procedure to restore normal blood flow to an obstructed coronary artery.

Coding points:

- ➔ Identify whether an artery, vein or both are being used as bypass graft
- ➔ How many grafts being done

❖ **CABG**



Harvesting Guidelines:

- ➔ Harvesting of saphenous veins is included in veins procedure. Whereas some other vein should be separately coded.

Some other vein

Any upper extremity vein open – 35500
Endoscopic – 33508
Femoral popliteal vein segment – 35572

Harvesting guidelines

Harvesting of all artery included in artery procedure except upper extremity artery (e.g.) (radial or ulna artery)

Upper extremity artery code = 35600

1. MD performing CABG x 3 with saphenous vein
2. CABG x 3 with femora popliteal vein segment?
3. CABG x 3, Harvested from ulna artery?

Q4. CABG x 5, first 2 is harvested from radial artery, another 3 is harvested from endoscopic vein?

Q5. CABGx6 harvested from

- ➔ Upper extremity vein open
- ➔ Endoscopic vein
- ➔ Femora popliteal vein segment
- ➔ Radial artery
- ➔ LIMA
- ➔ Saphenous vein

CVIR (Cardio Vascular Interventional Radiology)

- ➔ Cardio vascular procedures performed with the help of radiological guidance
- ➔ Catheters inserted in arteries for treatment purpose

Non- selective catheterization

Catheter inserted into main stream of artery

Selective catheterization

Catheter inserted into branches of specific artery

CVIR = 362XX (category) for 4 & 5th digit we have some guidelines

4th digit BASED ON catheter entry site

If above abdomen 4th digit is 1

If below abdomen 4th digit is 4

5th digit is based on coder

1st order: 5

2nd order: 6

3rd or more order = 7

1. RT MIDDLE CEREBRAL ARTERY

2. COMMON HEPATIC ARTERY

CVAP (Central Venus Access Procedure)

➔ Catheter inserted into vein for treatment purpose

Central 36555 to 36566	Peripheral 36568-36573
Jugular Subclavian Femoral vein Inferior vena cava	Basilic Cephalic

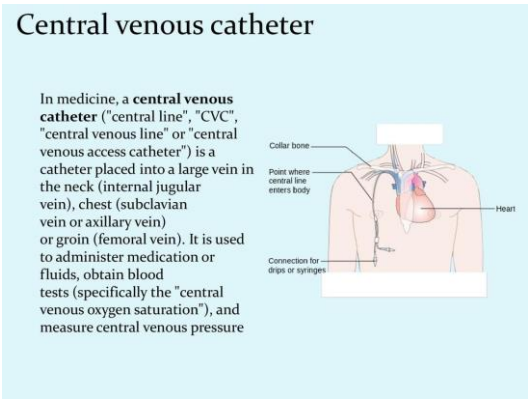
1. First cheek the procedure is done centrally or peripherally
2. Cheek whether the procedure is performed with tunnel or without tunnel
   {Tunnel – it is the soft tube before the procedure they will insert that tunnel and with that they will insert catheter}

3. Check whether the procedure is performed with port pump or without port pump

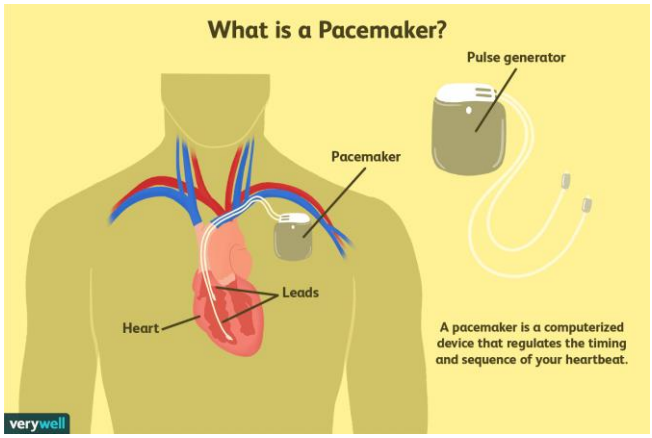
4. Check the age of the patient

Example:

1. Patient is 4 year old patient came to ED for respiratory failure physician performed catheter into femoral vein for treatment purpose?
   Answer:
2. Catheter inserted into basilic vein with US guidance for 10 year old patient.



Pacemaker (Cardiovascular System)



Pacemaker & Defibrillator

A pacemaker is a small device that's placed in the chest or abdomen to help control abnormal heart rhythms. This device uses electrical pulses to prompt the heart to beat at a normal rate. Pacemakers are used to treat arrhythmias. Arrhythmias are problems with the rate or rhythm of the heartbeat.

Defibrillators are devices that restore a normal heartbeat by sending an electric pulse or shock to the heart. They are used to prevent or correct an arrhythmia, a heartbeat that is uneven or that is too slow or too fast. Defibrillators can also restore the heart's beating if the heart suddenly stops

Pacemaker – SA node – natural pacemaker
Pacemaker consist 2 components

- Pulse generator (batteries)
- Electrodes / leads / wires

Pulse generator are placed in a “subcutaneous pocket” created in either a subclavicular site or underneath abdominal muscles joints below the ribcage.

Electrodes may be inserted through a vein – Trans venous or they may be placed on the surface of the heart – epicardial. The epicardial location of the electrodes requires a thoracotomy for electrode insertion.

Wire specifically y inserted into the vein of the heart.

Types of pacemaker:

1. **Single chamber pacemaker:** includes a pulse generator and one electrode inserted in either the atrium or ventricle
2. **Dual chamber pacemaker:** pulse generator + one electrode inserted in the right atrium and one electrode inserted in the right ventricle.
3. **Bi ventricular pacemaker:** pulse generator + electrode inserted into right & left ventricle.
4. **Multiple chamber pacemaker:** pulse generator + electrodes inserted into right & left atrium and right or left ventricle

Coding points:
1. Types of pacemaker
2. Electrodes insertion method
    a. Epicardial method
    b. Trans-venous/Intravenous
3. Pacemaker is permanent or temporary
Default: PERMANENT
4. Methods:
Placement
Removal
Replacement

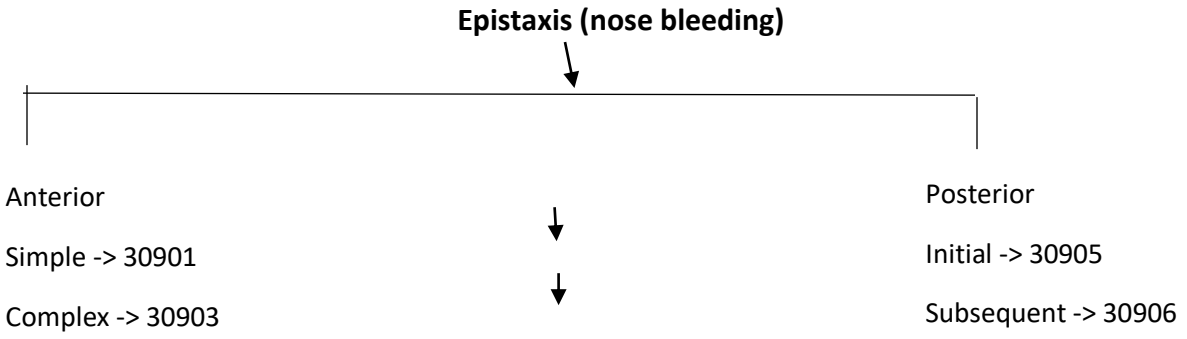
Example:
1. Removal and replacement of dual chamber pacemaker via transvenous

2. Removal of battery from pacemaker

3. Removal of single wire from single chamber pacemaker by transvenous

4. Pulse generator placed into exiting multiple leads cardiac defibrillator

5. Removal and replacement of dual chamber cardiac defibrillator via transvenous



Coding points:

First we have to check anterior or posterior

Anterior

When blood flows out from the front of the nose with the patient in sitting position

Posterior

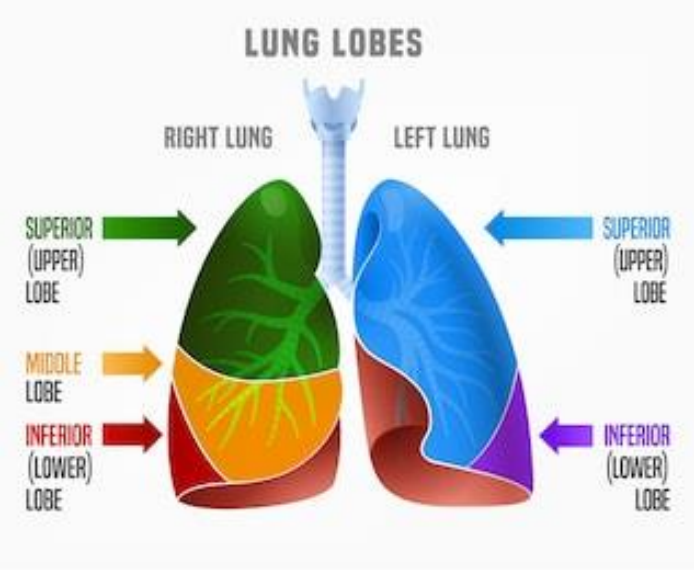
Bleed from the nose lacrimal duct mainly blood flows back into throat

Simple – Silver nitrate applying, afrin spray

Complex – Packing with nasal balloon, rhino rocket, Vaseline gauze, wick placement

Common questions:

1. Nasal endoscopy surgical with repair of CSF leakage in ethmoid region?
2. Nasal endoscopy surgical with repair of CSF leakage in sphenoid region?
3. Mediastinoscopy with lymph node biopsy?
4. Mediastinoscopy with lymphoma node biopsy?
5. ECMO insertion four years old through percutaneous?
6. Bronchoscopy Trans bronchial lung biopsies (3biopsy)
7. VATS single lobectomy right upper lobe?
8. VATS bilobectomy right lung?
9. VATS bilobectomy left lung?
10. Laryngoscopy with excision of tumor & stripping of vocal card?



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