Bladder

- LxWxHx0.75. >100 ml = urinary retention

Pregnancy

- Fetal heart rate:
  - 120-160 (can be a bit higher in early pregnancies)
- Abnormal IUP
  - Absence of yolk sac if mean sac diameter (MSD) >10 mm
  - Absence of fetal pole if MSD is >18 mm
  - No fetal heart motion is FP > 5 mm on transvaginal ultrasound (TVUS)
- Blighted ovum = gestational sac >2cm without yolk sac or fetal pole
- Gestational sac @ 4-6 weeks
- Yolk sac @ 5-7 weeks
- Fetal pole >7 weeks

Eye

- Width >5 mm measured 3 mm behind the globe
  - <5mm sensitive for excluding
  - >6mm specific of ruling in

FAST exam

- 0.5 cm stripe at Morrison pouch ~ 500 cc fluid
- 1.0 cm stripe at Morrison pouch ~ 1,000cc fluid

Cardiac

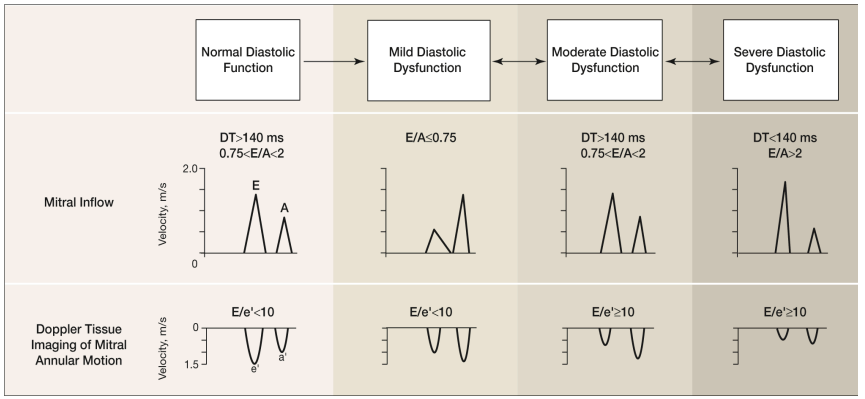
- **EPSS** - >7 sensitive, >10mm specific for LV dysfunction
  - **LVEF** -

<30%	30-50%	**55-70%**	>70%
Severely reduced	Mild/mod reduced	**Normal**	Hyper-dynamic

- **Ejection fraction**
  - Usually we just eyeball this, but can use the following formulas (they're an *estimation*)
    - 75.5-2.5xEPSS
    - Fractional Shortening x2
- **Fractional Shortening**
  - (End diastolic diameter – end systolic diameter)/end diastolic diameter
  - AKA EDD-ESD)/EDD

<15%	15-20%	**25-45%**	>70%
Severely reduced	Mild/mod reduced	**Normal**	Hyper-dynamic

- **MAPSE** (mitral annular plane of systolic excursion; use m-mode, focus on lateral wall)
  - < 1 cm = abnormal
- **Fractional area change**
  - (LVEDA – LVESA) / LVEDA
  - 35-65% = normal EF
- **Pericardial effusion**
  - **Size**
    - <0.5 cm – small
    - 0.5-2.0 cm – moderate
    - >2 cm – large
  - **Tricuspid/mitral valve pulsus paradoxus**
    - Tricuspid/mitral valve velocity change with respiration (on Doppler) >25% = abnormal
- **Right heart:**
  - RV free wall >5 mm = chronic hypertrophy
  - RV dimensions of dilation
    - >35 mm – Mid RV
    - >42 mm – Base of RV
    - >86 mm – Longitudinal length of RV
  - TAPSE (Tricuspid annular plane of excursion)
    - <1.6 cm = abnormal
- **Diastology**:



Aorta

- >3 cm = abnormal
- >5 cm w/ hypotension = ruptured AAA if no other causes of hypotension
- Iliacs >1.5 cm = abnormal

Bowel

- Enlarged Small Bowel = >2.5 cm
- Abnormal bowel wall thickness - >4mm

Appendix

- >6 mm + non-compressible – suspicious for appendicitis

Pyloris

- Normal = muscle wall thickness of 3 mm, length of 14 mm (Pi = 3.14 mnemonic)

Gallbladder

- Common Bile Duct (CBD)
  - <7mm normal
  - <10 mm normal in pts without GB
  - Rule of thumb – CBD should be <1st # of pts age
- Anterior gallbladder wall
  - >4 mm abnormal

Liver.

- Hepatomegaly - >15.5 cm in superior-inferior dimension

Spleen (normal values)

- <12 cm longitudinal
- <8 cm transverse
- <4 cm thick (deep)

Pancreas

- <3cm in the anterior/posterior dimension.
- Pancreatic duct enlarged if >2.0 mm

Lung

- Pleural effusion
  - Balik formula – maximal distance in supine pt at end-expiration in cranio-caudal dimension
    - mL of pleural fluid = mm x 20