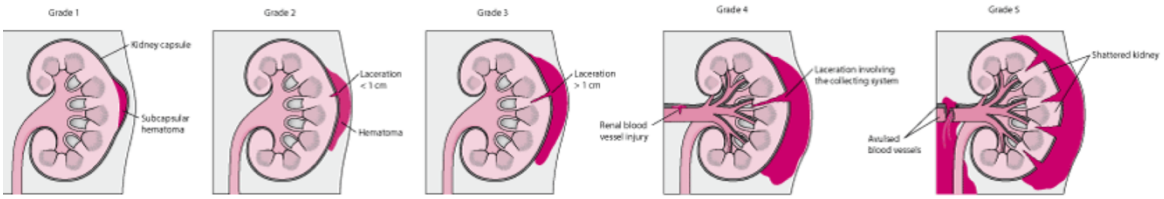
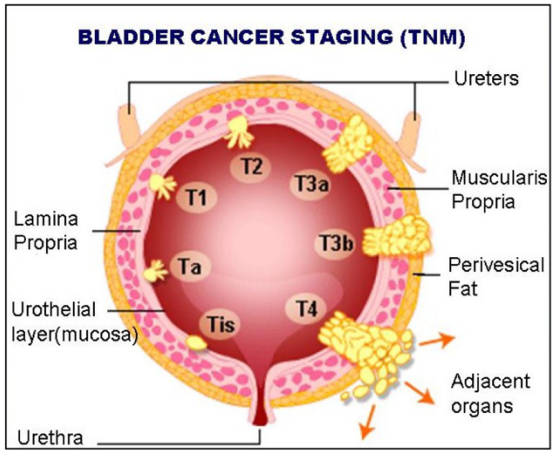
Kidney trauma

I	Flank pain + Hematuria with or without pericapsular Hematoma, but no evident kidney damage, So Only perinephric (subcapsular) hematoma without kidney tearing.
II	Injury to the cortex (tearing) with hematoma only of 1cm or **less.**
III	Injury to the cortex and medulla **without** reaching the collecting system with hematoma **more** than 1cm.
IV	Injury reaching the collecting system OR thrombosis to the renal vessels. - On IVU there will be **extravasations of contrast** and decreased filling.
V	Bleedly shattered kidney completely or avulsion of renal pedicle

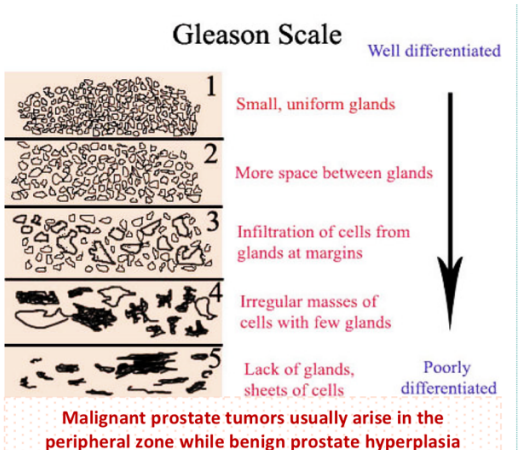


Bladder cancer

Superficial	Tis	In-situ disease
	Ta	Epithelium
	T1	Lamina propria invasion
Invasive (remove the whole bladder)	T2	Superficial muscle invasion
	T3a	Deep muscle invasion
	T3b	Perivesical fat invasion
	T4	Prostate or contiguous muscle



Prostate cancer



colorectal cancer staging

*Very important (don't mix Tumor stage with TNM)

Based on the TNM classification, we have 4 stages of Colorectal Cancer:		5 Year Survival chance
Stage 0	Tis Tumors	
Stage 1	T1 and T2 tumors (No nodes nor mets)	90%
Stage 2	T3 and T4 tumors (No nodes nor mets) / ^T3N0 tumors	80%^
Stage 3	Any lymph node involvement (+ve node/s with any T) * (depends on number of nodes involved)	27-69%*
Stage 4	Distant metastases (+ve mets with any T)	8%

In colon cancer we should use:

- Chemotherapy in Stage 3 & 4 .
- Chemotherapy in Stage 2 if: poorly differentiated, perineural invasion, perforated sigmoid cancer .

Keep in mind:
Tis - Invades BM
T1 - Submucosa
T2 - Muscularis Propria
T3 - Serosa
T4 - Adjacent organs
* T4 in colon = T3 in rectum
Rectum has no Serosa.

[9] Carcinoma in situ

T stage: How far into the wall has it grown?	
Tis[9]	invasion of mucosa only
T1	Invasion of submucosa
T2	Invasion of muscularis propria
T3	Full thickness (Serosa) in case of colon cancer. Perirectal fat and adjacent organs (as T4) in rectal cancer
T4	Invasion into adjacent organs
N stage: How many lymph nodes have been involved?	
N0	No lymph nodes involvement
N1	1-3 lymph nodes
N2	>3 lymph nodes
N3	distant lymph nodes
M stage: Are there distant organ metastasis?	
M0	No distant organ mets
M1	Distant organ (liver, lung)

Hypovolaemic shock can be divided into four categories, depending on the amount of blood loss : (class I, II, III, IV).

- you need to memorize it as you'll be asked about it in exams…

	Blood loss (ml)	Pulse	Blood pressure	Symptoms:
Class I:	< 750 (<15%)	< 100 (15-30%)	Normal	minimal symptoms
Class II:	750-1500	>100(15-30%) Tachycardia	Decrease "Hypotension"	- tachypnea - decreased pulse pressure - pale, sweaty and cold peripheries. - anxious.
Class III:	1500-2000	>120 (30-40%) Tachycardia	Decrease "Hypotension"	- Classic symptoms of shock, - tachypnea - pallor - cold peripheries - oliguria ,- decreased conscious level "**confused**"
Class IV:	>2000	>140 (>40%) Tachycardia	Decrease "Hypotension, unobtainable diastolic"	- Immediate threat to life - pallor, - cold peripheries - anuria, unconscious (>50%) "Lethargic".

priapism

Variable	Low flow (ischemic/occlusive)	High-flow (non-ischemic/Fistula)
Blood color	Dark blood	Bright red blood (similar to arterial blood at room temperature)
pH	<7.25 (acidosis)	=7.4 (normal)
pO2	<30 mmHg (hypoxia)	>90 mmHg (normal)
pCo2	>60 mmHg (hypercapnia)	<40 mmHg (normal)

above ninety bcuz most ot the blood is artreial

Classification of surgical wounds

The doctor said it is a super important table :

Classes		Site	Infection
I	**Clean**[19]	hernia repair, breast biopsy and Thyroid surgery	1.5 %
II	**Clean-contaminated**[20]	Cholecystectomy, planned bowel resection	2-5 %
III	**Contaminated**[21]	Unprepared bowel resection	5-30 %
IV	**Dirty/Infected**[22]	perforation, abscess	5-30 %

hemorroids

3.3 CLASSIFICATION

Internal hemorrhoids are classified by history (level of prolapse) and not by physical examination →

1. Grade 1 → bleeding without prolapse
2. Grade 2 → prolapse with spontaneous reduction hemorrhoids going in and out
3. Grade 3 →prolapse with manual reduction hemorrhoids going out and he has to push it in by his hand
4. Grade 4 → incarcerated, irreducible prolapse hemorrhoids going out and not going back in ,even by puhsing by his hand

acute pancreatitis

Ranson's Criteria "Assessing severity & prognosis" **"important MCQs"**

Most of them related to hypovolemia. we are assessing the prognosis here, management is the same.

TABLE 3-4 Ranson Criteria

Admission Criteria (GA LAW)	Initial 48-hr Criteria (C HOBBS)	Mortality
Glucose >200 mg/dL	Calcium <8 mg/dL Decrease in **H**ematocrit >10%	<3 criteria—1%
Age >55 yrs	PaO_2 <60 mm Hg	3–4 criteria—15%
LDH >350	**B**UN increase >8 mg/dL	5–6 criteria—40%
AST >250	**B**ase deficit >4 mg/dL	>7 criteria—100%
WBC >16,000	Fluid sequestration >6 L	

Diagnosing Shock state based on hemodynamic parameter:

Type	Central venous pressure	Cardiac output	SVR
Hypovolemic	↓	↓	↑
Cardiogenic	↑	↓	Normal or ↑
Septic	↓ or ↑	↑	↓
Traumatic	↓	↓ or ↑	↓ or ↑
Neurogenic	↓	↓	↓
Hypoadrenal	↓ or ↑	↓ or ↑	↓ or ↑

hernias

Incarcerated hernia	Irreducible swelling (there is no obstruction or interference with blood supply. The hernia simply will not reduce)	No evidence of bowel obstruction or strangulation.	Urgent herniotomy +/-Sedation and analgesia. Manual Reduction
Obstructed hernia	Irreducible swelling (hollow viscus is trapped and there is an obstruction with intact blood supply)	Symptoms and signs of bowel obstruction→ bilious (green vomiting), abdominal distention, constipation.	Emergent herniotomy
Strangulated hernia	Irreducible swelling (the arterial blood supply to the contents of the sac is compromised> ischemia)	Symptoms and signs of strangulation→ severe groin pain (1st sign), fever, tachycardia, skin discoloration of the groin (most reliable sign)	Emergent herniotomy +/- bowel resection

شيء مجهول

Table 14.2 Assessment of patients with portal hypertension using a modification of Child's grading system

Points scored			
Criterion	**1**	**2**	**3**
Encephalopathy	None	Minimal	Marked
Ascites	None	Slight	Moderate
Bilirubin (μmol/l)	< 35	35–50	> 50
Albumin (g/l)	> 35	28–35	< 28
Prothrombin ratio	< 1.4	1.4–2.0	> 2.0

Grade A = 5–6 points; grade B = 7–8 points; grade C = 10–15 points.

Burn degree

Depth		Histology	Appearance	Sensation	Healing	Example	Manage
1st		Epidermis only ,common in Caucasians who have less melanin Not calculated in TBSA	Erythema, blanches with pressure	Intact; mild to moderate pain	3-6 days No scarring	Sunburn & hot fluid	painkiller + fucidin cream (or fadiazine which is a sulfa broad spectrum antibiotic) + NO admission
2nd	Superficial	Epidermis and the superficial dermis ; skin appendage intact, Pinkish in color	Blisters, Erythema, moist, elastic; Blanches with pressure	intact leading to severe pain (worst pain)	1-2weeks Scarring is unusual	Hot water and soup	topical dressing + ointment NO Surgical intervention flamazine
	Deep	Epidermis and most of the dermis, most skin appendage destroyed.	Thick large blisters, white appearing with erythema, dry, waxy, less elastic, reduced blanch with pressure	nerve damage causing Less pain.	>3 weeks Significant scarring (due to destruction of appendage) and contracture so we do surgery		surgery debridement & skin grafting
3rd		All skin layers (epidermis and all dermis), destruction of all skin appendage, hair will fall out easily	Skin feels like leather due to loss of elasticity, dry Whitish or black in color Eschar formation Thrombosed vessels (No blood flow), does not blanch	Painless (anesthetic) although the surrounding areas of 2nd degree burns are painful.	Doesn't heal, takes very long time. Severe scarring and contracture	Flame burn	
4th		Reaches bones & muscles (you can see the underlying tissue)					

Determining Extent of Injury:

It's important to know the percentage of the surface area; it determines the mortality, SIRS.

- Burn extent determines therapy and prognosis (look in the history for cause & type of burn)
- Burn size estimation is often inaccurate
- Extent of injury described using percentage of total body surface area that is burned (TBSA)
- In adults with large area burns "rule of nines" or "wallace rule of nine" may be used (we divide the body into estimate areas of 9%)

In Small, multiple patchy burns , we use the patient's palm (شبر) as a 1% (0.8%to be exact).

Since children have larger head surface areas, the proportions are not the same, there is a chart found in the ER according to the age No need to memorize it

Memorize the **ADULT** percentages only.

Head and neck **9%** one upper limb **9%**

Anterior trunk **18%** one lower limb **18%**

Posterior trunk **18%** **genital**/ some say neck **1%**

In 1st degree burns TBSA is not calculated