DM	
It risks	-inf
Reason of inf risk	**Patient-related factors** -less systemic vascularity: ischemia & growth of anaerobics + less WBCs to that organ & dec their fun when they get there -peripheral sensory loss: minor traumas happen & manifistate to ulcers & feet inf -autonomic: Urine retention & stasis, risk for UTI -hyperglycemia: facilitates inf -immunity disturbance -postsurgery local inf: defects local immunity -hypercolonalization of skin&mucosa (where inj): asymptomatic, high risk of bacteremia Skin colonizators: S.aureus (specially MRSA type) Mucosal colonizators: Candida albicans (specially with DM-2) Vagina colonizators: non-C.albicans (in poorly controlled DM) "vaginal infl - vulvovaginitis" **B-related factors** (factors that B use with patients suffering from DM) -Candida albicans: glc help it to stick to vagina or buccal ep. "it very strongly sticks that it cant be phagocytosed" -Rhizopus: KB helps it to live in glc rich env. "it causes mucormycosis or zygomycosis"
Commonly seen in DM	-URTI & LRTI (most lethal) -periodontal (oral) -abdominal -genitourinary (UTI) -skin & soft tissue (diabetic foot)

URTI		
Causers	-Rhinocerenral Mucormycosis -P.aeruginosa	
Rhinocerenral Mucormycosis	Is	fungus
	class	very dangerous
	disease	mucormycosis
	species	Rhizopus, Absidia, Mucor
	symptoms	facial&ocular pain, nasal stuffness, malaise, fever, intranasal black eschars, <u>necrotic turbinates</u>
	Diagnosis	biopsy (seeing necrosis)
	Treatment	surgical removal & prolonged IV Amphotericin B
P.aeruginosa	Invasivion	Yes & malignant (from the external canal into mastoid & temporal bone, eventually reaching the whole skull base)
	Disease	Otitis Externa
	symptoms	Severe pain, otorrhea & hearing loss.
	Invst	Intense cellulitis and edema of the ear canal.
	Diagnosis	Radiology
	Treatment	surgical removal & IV antipseudomonas (ceftazidime)
LRTI		
Causers	**Gram positive**: S.aureus & S.pneumoniae. **Gram negative**: Enterobacteria & Legionella. **Other**: Influenza virus & TB	
Vaccinable	yes	
Genitourinary		
Causers	**Gram negative**: rods & group B streptococci. **Other**: Candida albicans	
Symptoms	-symptoms appear only if bacteruria is >10^5	
Diseases	-**Cystitis** (incomplete bladder emptying, risk for U-UTI like: <u>Bilateral Pyelonephritis</u> & <u>Emphysematous Pyelonephritis;</u> "mainly targets diabetics 60%, with 30% fatality") -**Vulvovaginitis**	
Diagnosis	Presence of: -flank mass (gas in kidneys seen by CT) -crepitus (pop-sound of joints & SC tissues)	
Treatment	IV antibiotics & nephrectomy (if needed)	

Abdominal infections		
Causers	**Enteric Gram negative bacteria and anaerobes**	
signs	-Gall stone -peritonitis -Gas gangrene (perforation may occur)	
Diseases	Severe fulminant(sudden) Cholecystitis	
Treatment	Cholecystectomy & broad spectrum antibiotics	
Skin and soft tissue infections		
Causers	-S.pyogenes -S.aureus -CA-MRSA (Methicillin-resistant S. aureus)	
Disease **(Necrotizing fasciitis)**	is	deep infection of SC tissue with progressive destruction of fascia, fat & muscle.
	special causers	-group A strept. -anaerobes S.aureus
	symptoms	-skin pain & anaesthesia of overlying skin -Violaceous discloration of skin -bullae(like burn bubbles) -crepitus -soft tissue gas (seen in CT)
	Treatment	aggressive surgical removal & IV antibiotics

Diabetic foot	
Type of inf	soft tissue (Cellulitis: inf reaching inner layers of skin)
Causers	**Cellulitis**: -beta-hemolytic streotococci: group A & B -S.aureus -Enterobacteria: E.coli, Klebsiella, Proteus spp. (chronic ulcers) **ulcer or nail injury** -P.aeruginosa (sinuses causer) **Deep soft tissue infections** -group A strept -gas-producing gram positive bacilli: Clostridium **Chronic Osteomyelitis** -streotococci: group A & B -S.aureus -Enterobacteria: E.coli ,Proteus mirabilis , K.pneumoniae. -Bacteroides fragilis

Complications	-chronic Osteomyelitis (bone inf) -gas gangrene -amputation -death.
Degrees	Range from SF into Osteomyelitis
Sings	-Sinus tracts within infected tissue
Pathogen	Ischemia
Osteomyelitis inf facilitators	- grossly visible bone (surgery) - big & deep ulcers - ulcers staying for >2w
Symptoms (pt might have 1+)	**Cellulitis** -tender -erythematous -non-raised skin lesion -lymphangitis (caused by group A strept) -Bullae (caused by group A strept or S.aureus) **Deep soft tissue infections** -acutely illness -LL painful induration(hardness) <u>especially the thigh</u> -Wounds (caused by anaerobes) **Acute Osteomyelitis** pain at the involved bone -fever -adenopathy. **Chronic Osteomyelitis** -fever -foul discharge -pain (rare) -deep penetrating ulcer -sinuses on foot planter surface
Diagnosis	-evaluate the patient's vascualr and neurological status. -radiology (& gallium-67) -ulcer examination determine depth & presence of sinus tract -biopsy (culture)
Treatment	-glc homeostasis & hydration **Mild cases** Surgical removal & Antobiotic therapy (Cloxacillin, cephradine, clindamycin, aminoglycosides & quinolones) "for CA-MRSA use TMP-SMX" **Moderate & severe cases** Surgical removal & Antobiotic therapy Amputation if needed
Prevention	- Patient education (Proper foot care) - diet low in fat and cholesterol - control DM - Self examination