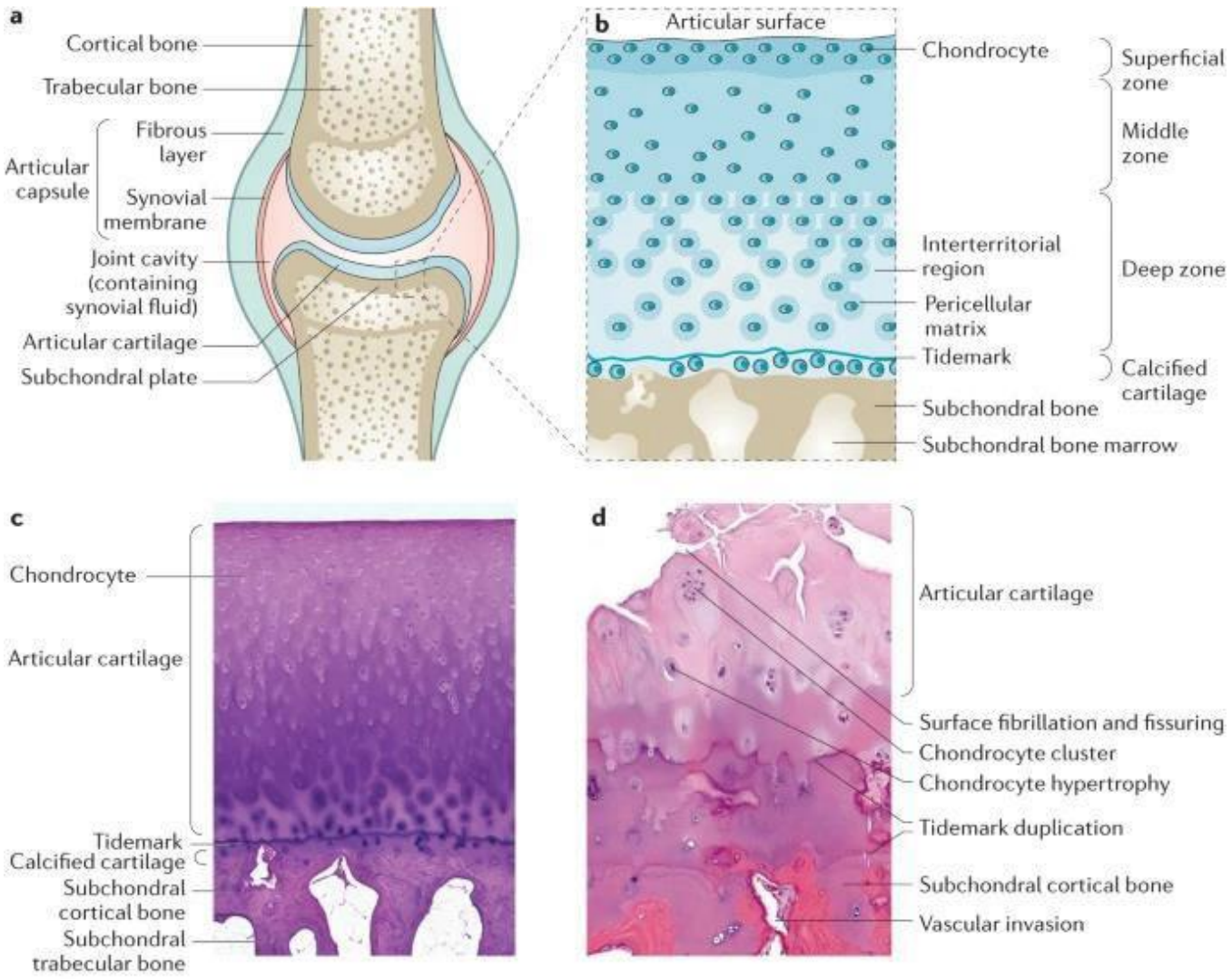
OSTEOARTHRITIS & GOUT

Presented by: Prof. Sultan Almogairen

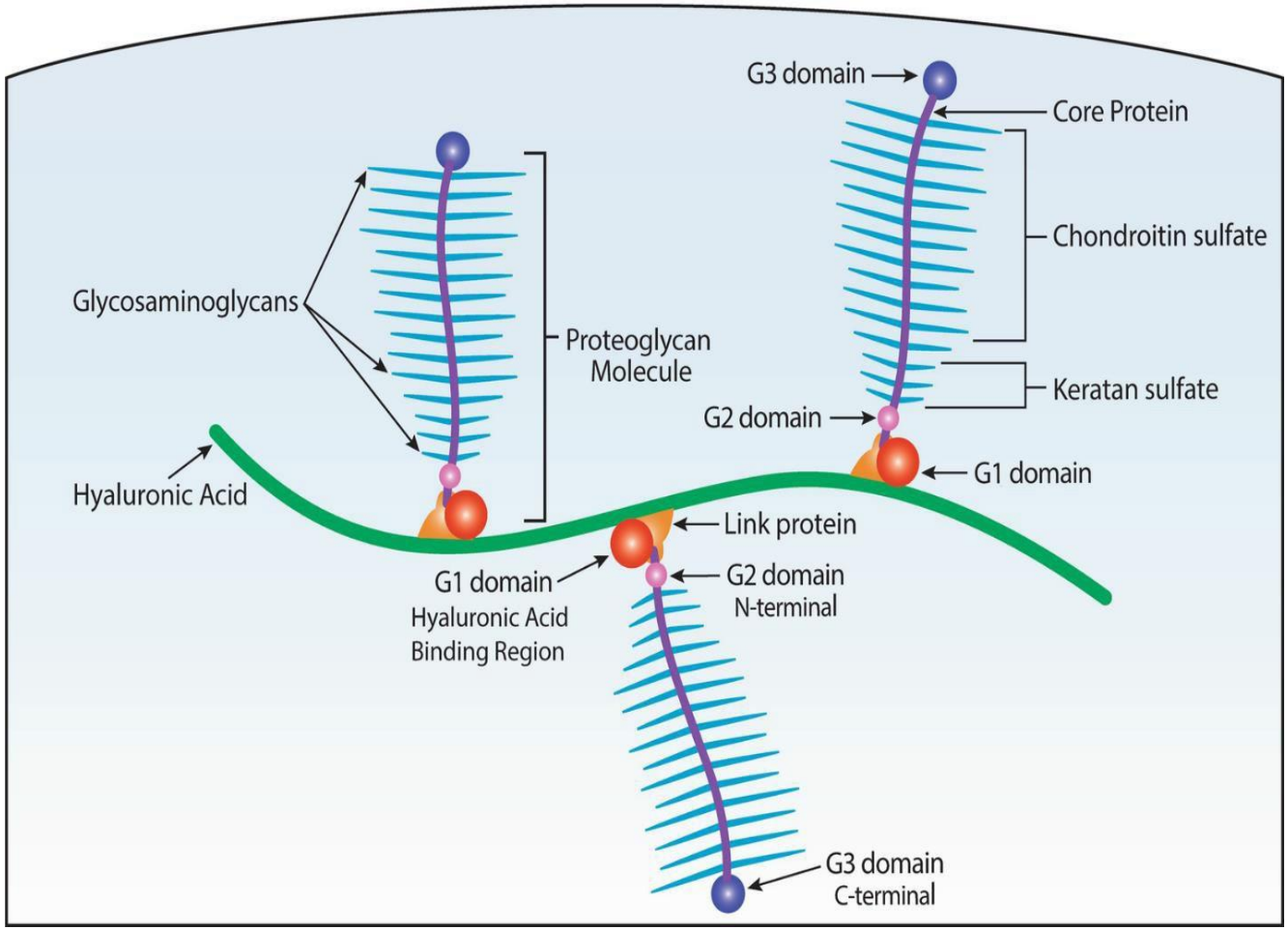
Objectives:

1. Definition and epidemiology
2. Pathology
3. Clinical Presentation
4. Management



Nature Reviews | Disease Primers

Articular Cartilage Aggrecan Molecule




Esq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Intervention	Joint		
	Hand	Knee	Hip
Topical nonsteroidal antiinflammatory drugs			
Topical capsaicin			
Oral nonsteroidal antiinflammatory drugs			
Intraarticular glucocorticoid injection			
Ultrasound-guided intraarticular glucocorticoid injection			
Intraarticular glucocorticoid injection compared to other injections			
Acetaminophen			
Duloxetine			
Tramadol			
Non-tramadol opioids			
Colchicine			
Fish oil			
Vitamin D			
Bisphosphonates			
Glucosamine			
Chondroitin sulfate			
Hydroxychloroquine			
Methotrexate			
Intraarticular hyaluronic acid injection	(First carpometacarpal)		
Intraarticular botulinum toxin			
Prolotherapy			
Platelet-rich plasma			
Stem cell injection			
Biologics (tumor necrosis factor inhibitors, interleukin-1 receptor antagonists)			

Strongly recommended
Conditionally recommended
Strongly recommended against
Conditionally recommended against
No recommendation

Intervention	Joint		
	Hand	Knee	Hip
Exercise			
Balance training			
Weight loss			
Self-efficacy and self-management programs			
Tai chi			
Yoga			
Cognitive behavioral therapy			
Cane			
Tibiofemoral knee braces		(Tibiofemoral)	
Patellofemoral braces		(Patellofemoral)	
Kinesiotaping	(First carpometacarpal)		
Hand orthosis	(First carpometacarpal)		
Hand orthosis	(Other joints)		
Modified shoes			
Lateral and medial wedged insoles			
Acupuncture			
Thermal interventions			
Paraffin			
Radiofrequency ablation			
Massage therapy			
Manual therapy with/without exercise			
Iontophoresis	(First carpometacarpal)		
Pulsed vibration therapy			
Transcutaneous electrical nerve stimulation			

Strongly recommended
Conditionally recommended
Strongly recommended against
Conditionally recommended against
No recommendation

Gout

Objectives:

1. To know the clinical presentation and management.


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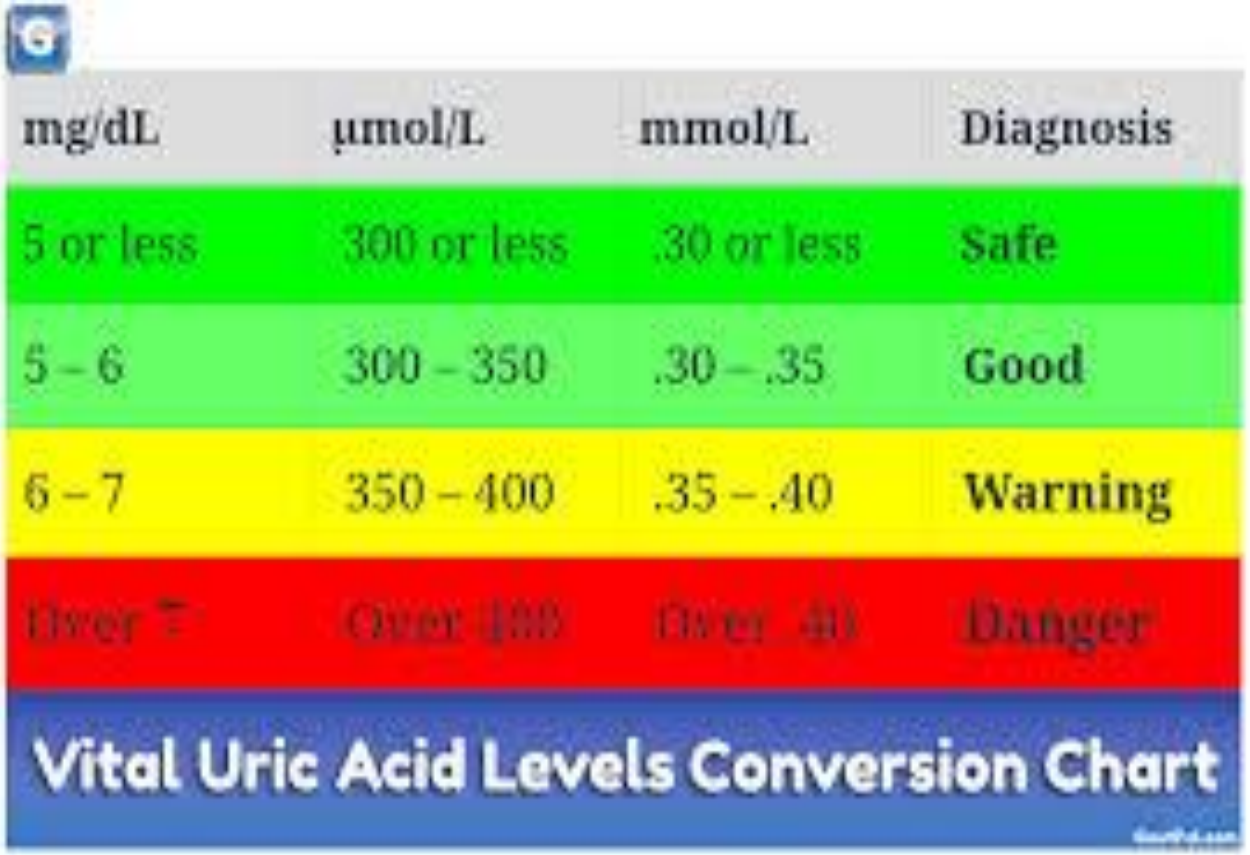
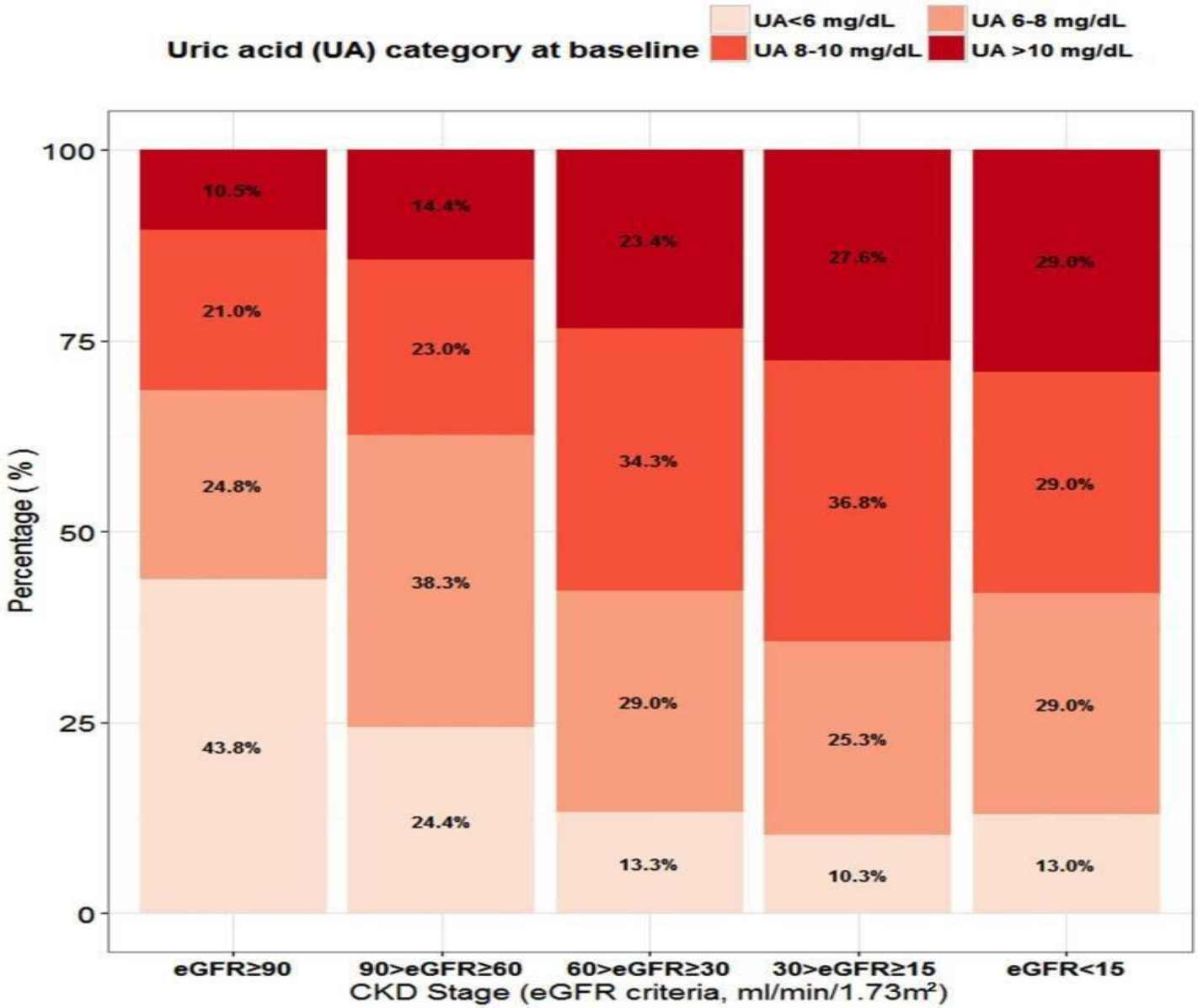
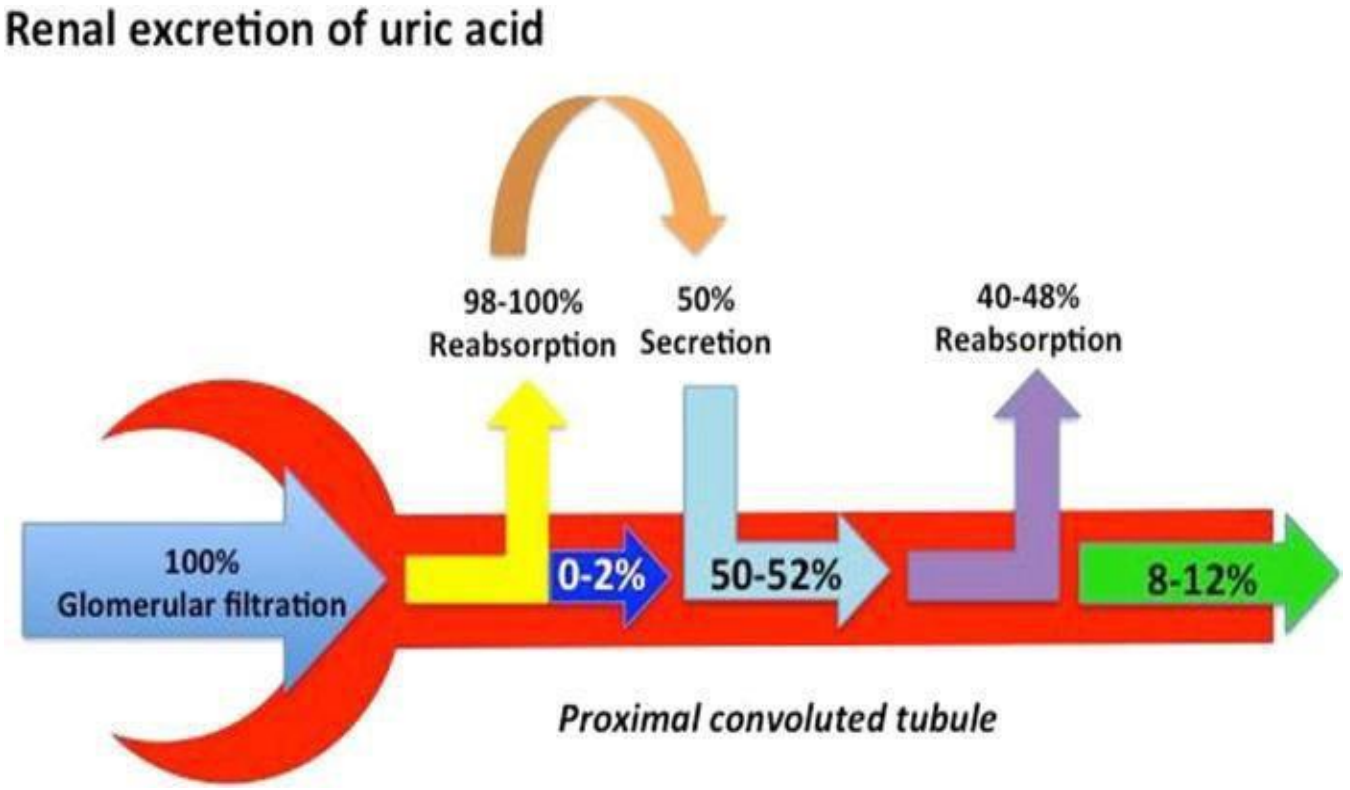

mg/dL
µmol/L
mmol/L
Diagnosis
5 or less
300 or less
.30 or less
Safe
5 – 6
300 – 350
.30 – .35
Good
6 – 7
350 – 400
.35 – .40
Warning
Over 7
Over 400
Over .40
Danger
Vital Uric Acid Levels Conversion Chart


Uric acid (UA) category at baseline
UA<6 mg/dL
UA 6-8 mg/dL
UA 8-10 mg/dL
UA >10 mg/dL
Percentage (%)
100
75
50
25
0
10.5%
21.0%
24.8%
43.8%
14.4%
23.0%
38.3%
24.4%
23.4%
34.3%
29.0%
13.3%
27.6%
36.8%
25.3%
10.3%
29.0%
29.0%
29.0%
13.0%
eGFR≥90
90>eGFR≥60
60>eGFR≥30
30>eGFR≥15
eGFR<15
CKD Stage (eGFR criteria, ml/min/1.73m²)



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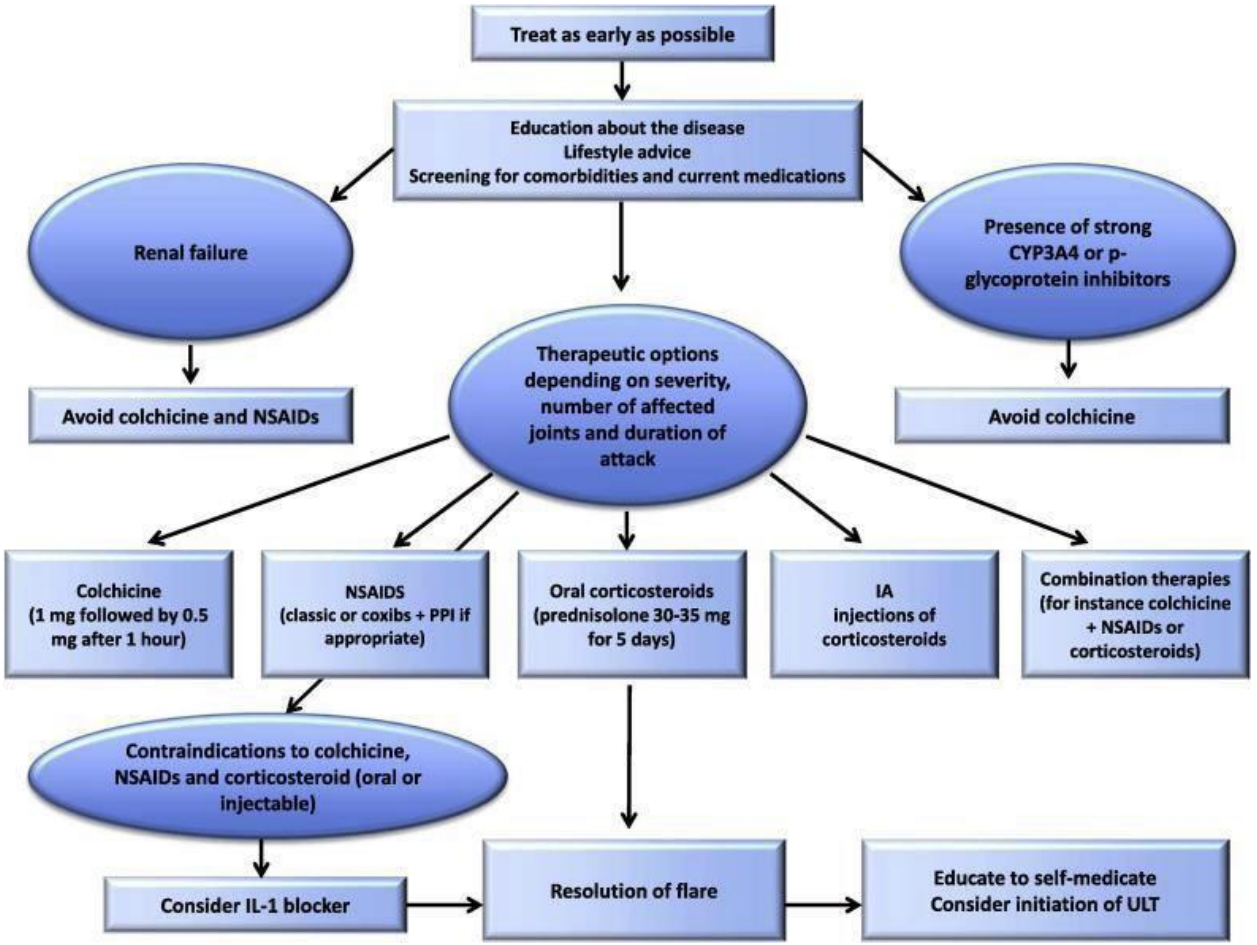
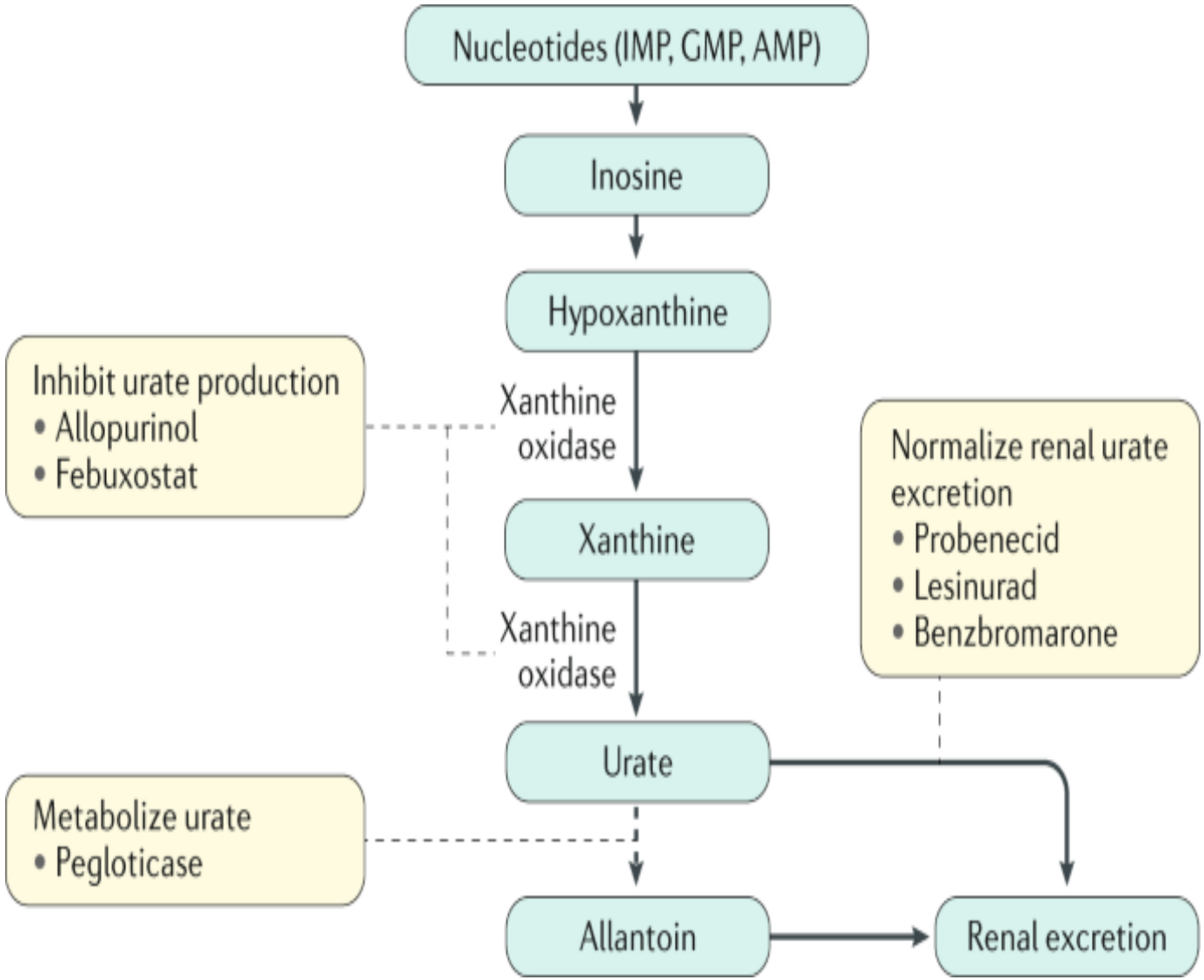
Medication	Route	Usual Dose	Generic Availability	Estimated Cost for 30-Day Supply ($)[a]
Chronic gout				
allopurinol (various products)	Oral	300-600 mg/day	Yes	18-36
febuxostat (Uloric)	Oral	40-80 mg/day	No	186
probenecid (various)	Oral	1-2 g/day (in 2 divided doses)	Yes	50-100
Treatment-refractory gout				
pegloticase (Krystexxa)	Intravenous	8 mg every 2 wk	No	5520

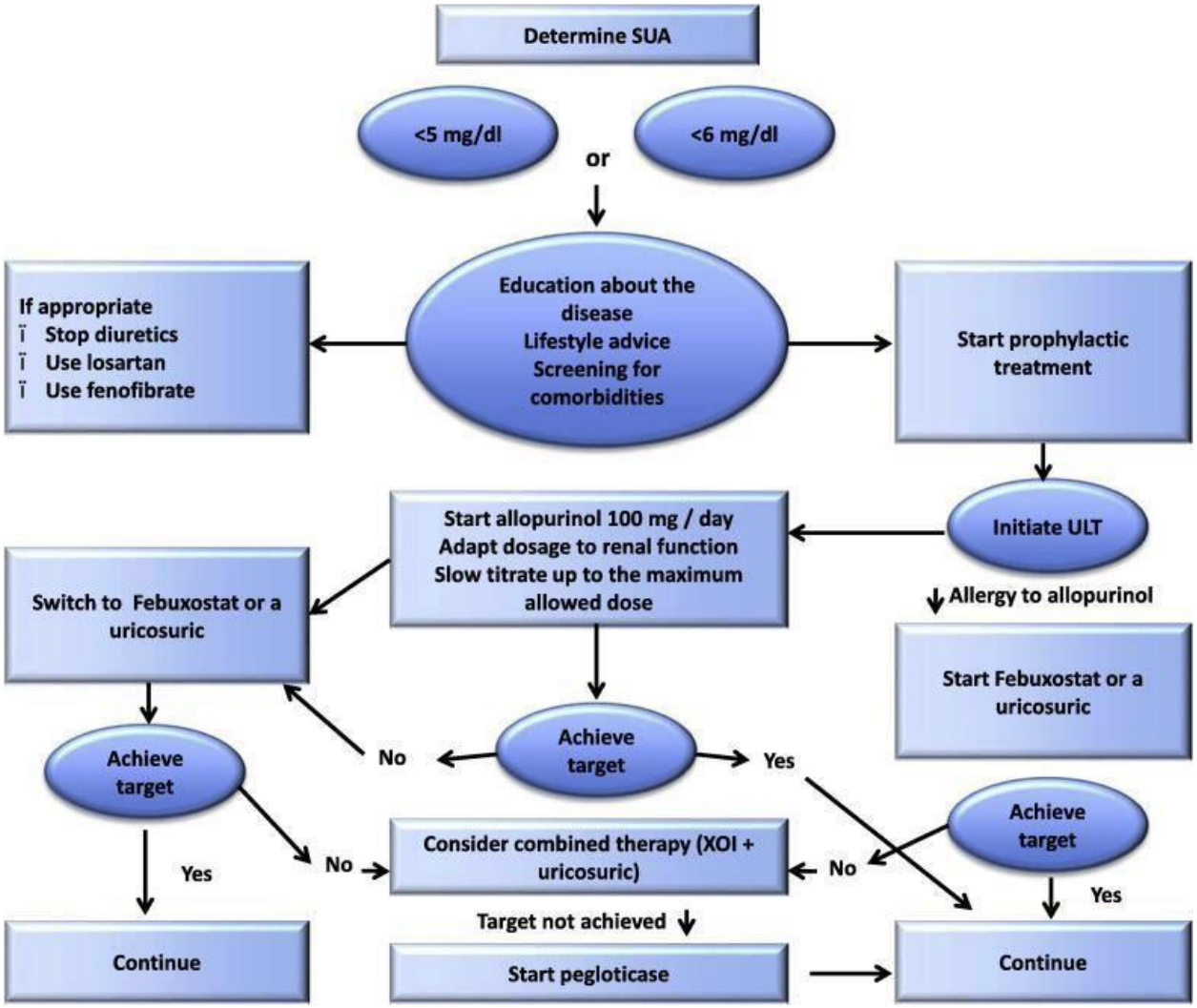
[a]Based on average wholesale price.

Avoid if Possible:-Organ Meats – liver, kidney, heart, sweetbreads, tripe, brain and tongue

Limit:-Beef. Chicken.camel. Seafood sardines Tuna Lamb..lard or pork pig mushrooms[fungi] vegetable:- high purine content include cauliflower, spinach, Chickpeas, Soy beans, Peanut, high fructose corn syrup,sweetened soda


Treat as early as possible
Education about the disease
Lifestyle advice
Screening for comorbidities and current medications
Renal failure
Presence of strong CYP3A4 or p-glycoprotein inhibitors
Therapeutic options depending on severity, number of affected joints and duration of attack
Avoid colchicine and NSAIDs
Avoid colchicine
Colchicine (1 mg followed by 0.5 mg after 1 hour)
NSAIDS (classic or coxibs + PPI if appropriate)
Oral corticosteroids (prednisolone 30-35 mg for 5 days)
IA injections of corticosteroids
Combination therapies (for instance colchicine + NSAIDs or corticosteroids)
Contraindications to colchicine, NSAIDs and corticosteroid (oral or injectable)
Consider IL-1 blocker
Resolution of flare
Educate to self-medicate
Consider initiation of ULT


Nucleotides (IMP, GMP, AMP)
Inosine
Hypoxanthine
Xanthine oxidase
Xanthine
Xanthine oxidase
Urate
Allantoin
Renal excretion
Inhibit urate production
• Allopurinol
• Febuxostat
Normalize renal urate excretion
• Probenecid
• Lesinurad
• Benzbromarone
Metabolize urate
• Pegloticase


Determine SUA
<5 mg/dl
or
<6 mg/dl
Education about the disease
Lifestyle advice
Screening for comorbidities
If appropriate
Stop diuretics
Use losartan
Use fenofibrate
Start prophylactic treatment
Initiate ULT
Start allopurinol 100 mg / day
Adapt dosage to renal function
Slow titrate up to the maximum allowed dose
Allergy to allopurinol
Start Febuxostat or a uricosuric
Switch to Febuxostat or a uricosuric
Achieve target
No
Yes
Achieve target
Yes
No
Consider combined therapy (XOI + uricosuric)
No
Achieve target
Yes
Target not achieved
Continue
Start pegloticase
Continue