Appendix 1 (as submitted by author)

(A) Acute Gout Diagnosis Rule

- Male sex (2 points)
- Previous patient reported arthritis flare (2 points)
- Onset within one day (0.5 points)
- Joint redness (1 point)
- First metatarsal phalangeal joint involvement (2.5 points)
- Hypertension or at least one cardiovascular disease (1.5 points)
- Serum urate level greater than 350 μmol/L (3.5 points)

Low (≤4 points), intermediate (5 to 7 points), or high (≥8 points) probability of gout.

Intermediate probability patients would strongly benefit from arthrocentesis, further imaging or referral to rheumatology to rule out gout.

Reference: Janssens HJ, Fransen J, van de Lisdonk EH, et al. A Diagnostic Rule for Acute Gouty Arthritis in Primary Care Without Joint Fluid Analysis. Arch Intern Med. 2010;170:1120-6.

(B) Common foods with high purine content

- Alcohol
- Certain fish (e.g. anchovies, sardines, herring, mussels, cod) and shellfish (e.g. shrimp, lobster, crab, oysters)
- Red meats (e.g. bacon, turkey, veal, venison, organ meats)

*Though they do not contain high purine content, foods high in fructose e.g. soft drinks are also associated with gout flares

References:

https://www.arthritis.org/diseases/more-about/shopping-list-for-gout https://www.arthritis.org/health-wellness/healthy-living/nutrition/healthy-eating/which-foods-are-safe-for-gout
https://www.rheumatology.org/Portals/0/Files/Gout-Fact-Sheet.pdf

(C) Joints commonly and less commonly affected by gout

Joints commonly affected by gout: Metatarsal joints, ankles, knees

Joints less commonly affected by gout: Metacarpal and interphalangeal joints, wrists, elbows

(D) Pharmacological approaches to acute gout flare and long-term urate lowering therapy.

Medication	Starting dosing examples	Caution/adverse effects
Acute flare*		
NSAIDs	Naproxen 500 mg PO BID Indomethacin 50 mg PO TID	CKD, cardiovascular disease, pregnancy, liver disease, higher risk of bleeding, hypertension, gastrointestinal upset, anticoagulant use
Colchicine	1.2 mg PO followed one hour later by 0.6 mg to doses not exceeding 1.8 mg/day	Diarrhea, myelosuppression, myotoxicity
Intra-articular steroids	Methylprednisolone 40-80 mg intra-articular once; dose depending on size of joint	Post-injection flare, tendon rupture, systemic steroid absorption, increased risk of infection
Systemic steroids[&]	Prednisone 0.5 mg/kg/day PO x 2-5 days with taper for 7-10 days	*Acute*: Hyperglycemia, infection, hypertension, mood changes, swelling *Chronic*: weight gain, cataracts, glaucoma, bone demineralization
Urate lowering therapy^		
Allopurinol (first-line therapy)	100 mg daily titrated upwards in 4-week increments	Hypersensitivity reaction, severe cutaneous reactions with HLA-B*58:01 positivity[@]
Febuxostat	80 mg once daily	Rash, cardiovascular events

NSAID: nonsteroidal anti-inflammatory drug, CKD: chronic kidney disease

*Pharmacotherapy should ideally be initiated within 24 hours of symptom onset; choice of agent should be directed according to side effect profiles and patient co-morbidities.

[&]Significant adverse effects less likely with acute use but may worsen pre-existing conditions

^Patients should be on acute gout prophylaxis during initial treatment with urate lowering therapy for 3-6 months duration. Reasonable approaches include colchicine 0.6 mg orally once or twice daily, naproxen 250 mg twice daily or prednisone 5 mg daily. Consider rheumatology referral if serum urate target of <360 µmol/L is not reached despite maximum possible dose of 900 mg allopurinol daily

[@]HLA-B*58:01 testing should be performed prior to allopurinol therapy in patients of Korean, Han Chinese, Thai or African-American decent given associations with severe cutaneous reactions

Reference: FitzGerald JD, Dalbeth N, Mikuls T, et al. 2020 American College of Rheumatology Guideline for the Management of Gout. Arthritis Rheum. 2020:doi:10.1002/art.41247.