

SUPPLEMENTARY APPENDIX 3: Specification of Important and Critical Outcomes Identified for the Systematic Literature Review

2020 American College of Rheumatology Guideline for the Management of Gout

| | Gout flares | Pain | Tophus | Patient Global | Health Related QOL | Activity Limitation | Serum urate | Serious Adverse events | Patient acceptability | Patient adherence | Neurotoxicity / cancer risk | Mortality rates | Tolerability of allopurinol (AHS) | Nephrolithiasis | Joint Tenderness | Joint Swelling | CVD outcomes |
|--|-------------|------|--------|----------------|--------------------|---------------------|-------------|------------------------|-----------------------|-------------------|-----------------------------|-----------------|-----------------------------------|-----------------|------------------|----------------|--------------|
| Indications for urate-lowering therapy ...starting ULT compared vs. no ULT | | | | | | | | | | | | | | | | | |
| 1. For patients with tophi... | XX | X | XX | X | X | X | XX | X | | | | | | | | | |
| 2. For patients with radiographic damage | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 3. For patients without subcutaneous tophi and with frequent gout flares | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 4. For patients without tophi < 2 flare | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 5. For patients without tophi and who have experienced a single gout flare | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| Approaches to Initiating urate lowering therapy (ULT) | | | | | | | | | | | | | | | | | |
| 6. Start during a flare | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 7. Titration vs. fixed dose | XX | X | X | X | X | X | XX | XX | | X | | | | | | | |
| 8. Non-physician augmented | XX | X | X | X | X | X | XX | X | | X | | | | | | | |
| 9. Anti-inflammatory prophylaxis | XX | X | X | X | X | X | XX | X | | X | | | | | | | |
| 10. Drug specific (NMA) | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 11. ESRD/HD – Allo vs. FBX | XX | X | X | X | X | X | XX | X | | | | | | | | | |
| 12. HLA-B*5801 | XX | X | X | X | X | X | XX | XX | | | | | | | | | |
| Ongoing Management of Urate-Lowering Therapy in patients with gout | | | | | | | | | | | | | | | | | |
| 13. sUA titration vs. fixed dose | XX | X | X | X | X | X | XX | X | | X | | | | | | | |
| 14. Not in remission sUA targeting | XX | X | X | X | X | X | XX | X | | X | | | | | | | |
| 15. In remission, sUA targeting | XX | X | X | X | X | X | XX | X | | X | | | | | | | |
| 16. ULT > 2 years, sUA targeting | XX | X | X | X | X | X | XX | X | | X | | | | | | | |

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| 17. Poorly controlled gout despite at sUA target | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 18. Not in remission, at target, increase ULT? | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 19. In remission, taper or stop ULT? | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 20. In remission, relax sUA target? | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 21. Intensive ULT time limits | xx | | x | | | | | xx | | | x | x | | | | | |
| 22. On FBX with CVD | xx | x | x | x | x | x | xx | xx | | | | | | | | | x |
| 23. Allopurinol desensitization | | | | | | | | xx | x | | | | x | | | | |
| 24. XO1 mono fail | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 25. Second XO1 fail | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 26. Uricosuric fail (Lesinurad) | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 27. XO1, uricosurics fail (Pegloticase) | xx | x | x | x | x | x | xx | x | | | | | | | | | |
| 28. Check urinary uric acid | | | | | | | | | | | | | | x | | | |
| 29. Alkalinize urine | | | | | | | | | | | | | | x | | | |
| 30. Monitor urinary uric acid | | | | | | | | | | | | | | x | | | |

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|---|-------------|------|--------|----------------|--------------------|---------------------|-------------|------------------------|-----------------------|-------------------|-----------------------------|-----------------|-----------------------------------|-----------------|------------------|----------------|--------------|
| General Management of a Gout Flare | | | | | | | | | | | | | | | | | |
| 31. Ice | | XX | | X | | | | X | | | | | | | X | | |
| 32. Anti-inflammatory NMA | | XX | | X | | | | X | | | | | | | X | X | |
| 33. IL-1 | | XX | | X | | | | X | | | | | | | X | X | |
| Management in Patients with Suboptimal Treatment Responses after 36-48 hours | | | | | | | | | | | | | | | | | |
| 34. Switching vs. continuing | | XX | | X | | | | X | | | | | | | X | X | |
| 35. Adding | | XX | | X | | | | X | | | | | | | X | X | |
| 36. Switching vs. adding | | XX | | X | | | | X | | | | | | | X | X | |
| 37. Switch vs. IL-1 | | XX | | X | | | | X | | | | | | | X | X | |
| 38. Adding vs. IL-1 | | XX | | X | | | | X | | | | | | | X | X | |
| 39. Switching vs. Intra-articular | | XX | | X | | | | X | | | | | | | X | X | |
| 40. Adding vs. Intra-articular | | XX | | X | | | | X | | | | | | | X | X | |

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|--|-------------|------|--------|----------------|--------------------|---------------------|-------------|------------------------|-----------------------|-------------------|-----------------------------|-----------------|-----------------------------------|-----------------|------------------|----------------|--------------|
| Lifestyle factors in patients with gout | | | | | | | | | | | | | | | | | |
| 41. EtOH | xx | x | x | x | x | x | x | x | x | | | | | | | | |
| 42. Limit purine | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 43. Limit High Fructose Corn Syrup | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 44. Dairy protein | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 45. DASH diet | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 46. Weight loss | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 47. Other urate lowering meds | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 48. Vitamin C | xx | x | x | x | x | x | x | x | | | | | | | | | |
| 49. Cherry extract | xx | x | x | x | x | x | x | x | | | | | | | | | |
| Asymptomatic Hyperuricemia | | | | | | | | | | | | | | | | | |
| 50. EtOH | xx | | x | | x | | x | x | x | | | | | | | | |
| 51. Limit purine | xx | | x | | x | | x | x | x | | | | | | | | |
| 52. Limit High Fructose Corn Syrup | xx | | x | | x | | x | x | x | | | | | | | | |
| 53. Dairy protein | xx | | x | | x | | x | x | x | | | | | | | | |
| 54. DASH diet | xx | | x | | x | | x | x | x | | | | | | | | |
| 55. Weight loss | xx | | x | | x | | x | x | x | | | | | | | | |
| 56. Other urate lowering meds | xx | | x | | x | | x | x | x | | | | | | | | |
| 57. ULT | xx | | x | | x | | x | x | x | | | | | | | | |

Legend: xx = critical outcome, x = important outcome