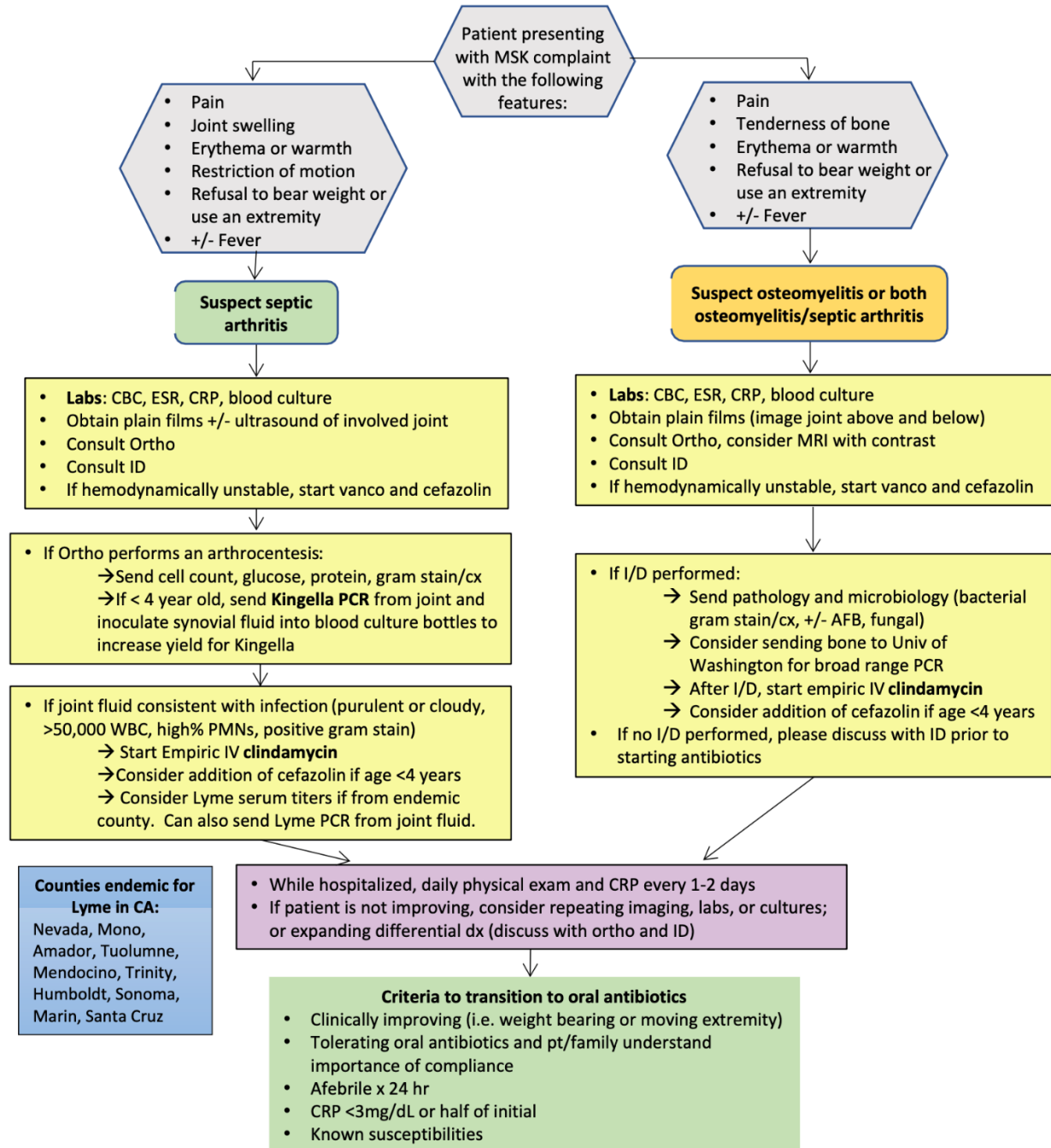


# PEDIATRIC MUSCULOSKELETAL INFECTIONS GUIDELINE

## Exclusion Criteria

- Age less than 6 months (may need to consider lumbar puncture, unusual organisms)
- Chronic infection or previous septic joint/osteomyelitis
- Immunocompromised
- Hardware infection
- Penetrating trauma injuries

## Guidelines for management of pediatric patients with suspected musculoskeletal infections



## How to send special labs

- Place a miscellaneous order with the following information:
  - Kingella DNA PCR from joint fluid: Send out to Quest (Test Code 18872)
  - Lyme PCR from joint fluid: Send out to ARUP (Test Code 0055570)
  - University of Washington broad range PCR (bacterial, fungal, AFB)
    - Needs a separate fluid/bone sample to be sent directly to send out lab
    - Needs additional lab form faxed to sendout lab (734-5665) available at: <http://depts.washington.edu/molmicdx/forms/order.pdf>

## Most commonly used antibiotics for musculoskeletal infections with typical dosing and side effects


|  | Cefazolin (IV)            | Cephalexin (PO)                      | Ceftriaxone (IV)                 | Vancomycin (IV)                                      | Clindamycin (IV or PO)                   | Ampicillin (IV)           | Amoxicillin (PO)          | Bactrim (IV or PO)      | Linezolid (IV)                                    | Daptomycin (IV)                               |
|--|---------------------------|--------------------------------------|----------------------------------|--|--|---------------------------|---------------------------|-------------------------|---|---|
| <b>Daily amount</b>                            | 150 mg/kg/day divided Q8H | 100-150 mg/kg/day divided TID or QID | 50-100 mg/kg/day divided Q12-24h | Start at 15mg/kg Q6H                                 | 40mg/kg/day divided Q6H or Q8H           | 200 mg/kg/day divided Q6H | 100 mg/kg/day divided TID | 12mg/kg/day divided BID | <12 years: 10mg/kg Q8H<br>≥12 years: 10mg/kg Q12h | 6-10 mg/kg daily (more frequent dosing < 2mo) |
| <b>Single daily max for MSK infection</b>      | 2000 mg max dose          | 1000 mg max dose                     | 2000 mg max dose                 | Adjust based on vanc trough level and renal function | 900 mg max IV dose<br>600 mg max PO dose | 2000 mg max dose          | 1000 mg max dose          | 160 mg max dose         | 600mg max dose                                    | No max dose                                   |
| <b>Side Effects</b>                            |                           |                                      |                                  |  |  |                           |                           |                         |   |   |
| Diarrhea including <i>C. difficile colitis</i> | +                         | +                                    | +                                | +  | ++                                       | +                         | +                         | +                       | ++  | +   |
| Bone marrow suppression                        | +                         | +                                    | +                                | +  |  | +                         | +                         | +                       | ++  |   |
| Rash, including Stevens-Johnson syndrome       | +                         | +                                    | +                                | +  | +  | ++                        | ++                        | ++                      | +   | +   |
| Nephrotoxicity                                 | +                         | +                                    |                                  | ++   |  | +                         | +                         | +                       |   | +   |
| Elevated transaminases                         |                           |                                      | +                                |  |  |                           |                           | +                       | +   | +   |
| Elevated CK                                    |                           |                                      |                                  |  |  |                           |                           |                         |   | +   |
| Optic neuropathy                               |                           |                                      |                                  |  |  |                           |                           |                         | +   |   |
| Serotonin syndrome                             |                           |                                      |                                  |  |  |                           |                           |                         | +   |   |
| Lactic acidosis                                |                           |                                      |                                  |  |  |                           |                           |                         | +   |   |

## Discharge and Outpatient Management

- General length of therapy:
  - Septic arthritis 3-4 weeks
  - Osteomyelitis 4-6 weeks
- If indicated, arrange for outpatient parenteral (IV) antimicrobial therapy (OPAT) with ID and discharge planner
- Ortho outpatient referral for follow-up in 1-2 weeks
- ID outpatient referral for follow-up in 2-3 weeks
- Weekly labs if receiving parenteral therapy to monitor side effects while on IV antibiotics
  - All will need CBC, CRP, ESR, BMP
  - Additional labs:
    - Ceftriaxone: LFTs
    - Vancomycin: weekly trough
    - Daptomycin: CK

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