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| Appendix 3. Summary of the literature evaluating small joint injections. | | | | | | |
| **Author/Year** | **Target** | **Study Design** | **Level of Evidence** | **Subject Type/Number** | **Accuracy Confirmation** | **Outcome** |
| Lopes 2008[31](#_ENREF_31) | MCP joint | Prospective LMGI accuracy | Level 1 | 39 live human subjects | Arthrogram | LMGI = 97% accurate |
| Reach 2009[71](#_ENREF_71) | MTP joint | Cadaveric USGI accuracy | Level 2 | 10 cadaveric specimens | Dissection | USGI = 100% accurate |
| Wempe 2012[83](#_ENREF_83) | MTP joint | Cadaveric USGI accuracy | Level 2 | 5 cadaveric specimens | Dissection | USGI = 100% accurate |
| Jones 1993[26](#_ENREF_26) | CMC, MCP, DIP joints | Human LMGI accuracy | Level 3 for CMC, level 5 for MCP and DIP | Live human subjects (CMC = 3, MCP = 1, DIP = 1) | Arthrogram | LMGI CMC, MCP, and DIP = 0% accurate |
| Khosla 2009[66](#_ENREF_66) | TMT joint | Cadaveric USGI vs. LMGI accuracy | Level 2 | 14 cadaveric specimens | Arthrogram and dissection | USGI = 64% accurate, LMGI = 25% accurate |
| Umphrey 2008[82](#_ENREF_82) | CMC joint | Cadaveric USGI accuracy | Level 2 | 17 cadaveric specimens | Arthrogram | USGI = 94% accurate |
| Balint 2002[52](#_ENREF_52) | CMC, MTP, PIP joints | Prospective, non-randomized comparison study between ability to aspirate fluid from joint using USG vs LMG | Level 3 | 30 live human subjects | None | Successful aspiration with USG = 100%, successful aspiration with LMG = 0% |
| Raza 2003[81](#_ENREF_81) | MCP, PIP joints | Prospective, non-randomized comparison study of USGI vs LMGI accuracy | Level 3 | 70 live human subjects | Ultrasound imaging | USGI = 96% accurate, LMGI = 59% accurate |
| Gonclaves 2011[16](#_ENREF_16) | MCP, MTP joints | Human USGI efficacy | Level 4 | 27 live human subjects | None | Accuracy was not assessed, all subjects improved |
| MCP = metacarpophalangeal joint, MTP = metatarsophalangeal, USGI = ultrasound-guided injections, LMGI = landmark-guided injections, vs = versus, TMT = tarsometatarsal, CMC = carpometacarpal, PIP = proximal interphalangeal, USG = ultrasound-guidance, LMG = landmark-guidance | | | | | | |