**Descatha A, Huard L, Aubert F et al. Meta-analysis on the performance of sonography for the diagnosis of carpal tunnel syndrome. Semin Arthritis Rheum. 2012;41(6);914-22.**

PMID: 22244369

Design: Meta-analysis of studies of the diagnostic accuracy of sonography for CTS

Purpose of study: to review and pool recent studies of the diagnostic performance of sonography versus electrodiagnostic testing (EDX) for CTS

Results and reasons not to cite as evidence:

* The authors pooled 13 studies of sonography in which the reference standard for CTS was a combination of clinical symptoms and abnormal results of EDX, pooled the results of the sensitivity and specificity of sonography, and estimated likelihood ratios for positive and negative tests (LR+ and LR-)
  + In general, a LR+ greater than 10 and a LR- less than 0.1 are considered to represent tests which are valuable in discriminating between people with and without a particular clinical condition
* Different median nerve cross-sectional areas were examined as possible cutoff thresholds between normal and abnormal results (9.5 to 10.5 mm2 , 7.0 to 8.5 mm2, and 11.5 to 13.0 mm2)
* For the different threshold values examined, none of the LR+ exceeded 10 and none of the LR- were less than 0.1
* The authors concluded that sonography could not replace EDX but could give complementary results
* The principal problem with the meta-analysis is that 9 of the 13 included studies used a case-control method of participant selection; this means that patients with suspected CTS were compared with patients without symptoms of CTS, which can bias the results of a diagnostic study, especially tending to inflate the specificity of the test
* While the conclusions regarding sonography (that its diagnostic accuracy is not superior to EDX) are likely to be justified, it is probably well-advised to examine separately the 4 included studies which enrolled consecutive patients who might have CTS