



A Survey of the Use of Ultrasound by Upper Extremity Surgeons in 2020

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Introduction:

- The use of musculoskeletal ultrasound (US) among hand surgeons appears to be increasing.
- The purpose of this study was to determine the utilization patterns and attitudes regarding US among ASSH members in 2020 as well as the changes in usage patterns since a previous survey in 2015.

Methods:

- In 2020, an updated and expanded 27-question survey was distributed to 4,852 members of the American Society for Surgery of the Hand (ASSH).
- Questions assessed: (1) respondent demographics, training, and practice patterns, and (2) access, utilization, training and opinions pertaining to US.
- Non-responders were sent reminders at 2 and 4 weeks, and the survey was closed after 6 weeks.

Results:

- A total of 418 surveys (8.6%) were analyzed. Ninety-seven percent of respondents had completed a fellowship.
- Compared to 2015, there was an increase in the percentage of respondents using US for diagnostic purposes (51% to 68%), as well as having personal access to US machines (43% to 58%).
- Of the 68% who used US in 2020, 35% personally performed exams while 33% referred to practice partners.
- Individuals practicing 6-10 years in medium size private practices (11-20 individuals) were most likely to have US machine access and personally perform exams, while academicians were most likely to refer to practice partners.
- US use to assist in diagnosing CTS increased from 19% to 27%.
- The most common reason for using US was convenience and practice efficiency, while the most common reasons for not using US were no machine access and opinion that US was not as accurate as electrodiagnostic testing.
- In 2020, 33% of respondents performed US guided injections, most commonly into the carpal tunnel and 1st CMC joint based on improved accuracy and patient satisfaction.
- The most common reasons for not using US for injections were an opinion that US unnecessary and no machine access.
- Most US users were self-taught, and 66% of respondents believed that US use among hand surgeons will increase over the next 5-10 years.

Tables and Figures:

Figure 1. Survey Exclusion Criteria Diagram

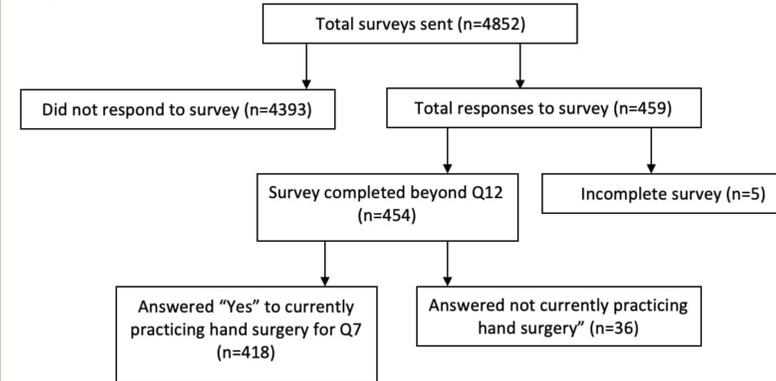


Table 1. Ranked Reasons for Personally Using US to Diagnose CTS

Reason:	Rank n (%):			
	1	2	3	4
Convenience/efficacy	32 (57%)	18 (32%)	5 (9%)	1 (2%)
Patient comfort compared to EMG/NCS	15 (27%)	27 (48%)	12 (21%)	2 (4%)
Accuracy of diagnosis	6 (11%)	9 (16%)	35 (63%)	6 (11%)
Other	3 (5%)	2 (4%)	4 (7%)	47 (84%)

Table 2. Ranked Reasons for Using US-Guided Injections

Reason:	Rank n (%):				
	1	2	3	4	5
Improved accuracy	82 (82%)	15 (15%)	1 (1%)	1 (1%)	1 (1%)
Increased patient satisfaction	7 (7%)	44 (44%)	41 (41%)	7 (6%)	0 (0%)
Increased reimbursement for injections	4 (4%)	17 (17%)	38 (38%)	52 (52%)	11 (11%)
Reduced patient discomfort	3 (3%)	25 (25%)	38 (38%)	32 (32%)	2 (2%)
Other	3 (3%)	0 (0%)	3 (3%)	8 (8%)	86 (86%)

Conclusions:

- Compared to 2015, the majority of responding upper extremity surgeons now have personal access to US machines.
- Utilization of diagnostic US appears to be increasing and two-thirds of respondents believed that US use will continue to increase among upper extremity surgeons.
- Potential barriers to adoption include access to machines and formal training, as well as knowledge gaps with respect to evidence-based applications.

Table 3. Reasons for Performing Ultrasound

Reason	n*	%
Diagnose tendon disorders	160	80
Perform procedures for tendon disorder	99	49
Diagnose nerve disorders	111	55
Perform procedures for nerve disorders	82	41
Diagnose joint disorders	89	44
Perform procedures for joint disorders	114	57

Figure 2. Access to Ultrasound in Office by Practice Setting

