

Comparison of Publication Rates for Musculoskeletal Oncology Abstracts Presented at National Meetings



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Background

Scientific meetings provide scientists and clinicians a forum to disseminate new research and advance patient care. The American Academy of Orthopaedic Surgeons (AAOS), Connective Tissue Oncology Society (CTOS), and Musculoskeletal Tumor Society (MSTS) annual meetings are examples of such gatherings in the field of musculoskeletal oncology. Acceptance for a presentation follows peer-review, but is not as rigorous as the review process for journal publication.

Questions and purposes

This study therefore asked:

- What are the publication rates for oncology abstracts presented at the AAOS, CTOS, and MSTS annual meetings?
- What are the characteristics of publications following abstracts for each meeting?

Methods

1408 podium and poster oncology abstracts from the AAOS (2013 to 2015), CTOS (2012 to 2014), and MSTS (2012 to 2014) annual meetings were reviewed. Searches were performed with PubMed and Google Scholar databases to identify full-text publications following abstracts using keywords from the abstract title combined with the name of the first and then last author, individually. If no match was found in the four years following presentation, an abstract was not considered published. Characteristics of each abstract (year, type [podium or poster], and country of origin) and resulting publication (publication date, journal, and impact factor) were collected. Statistical analysis was performed using the chi-square and Kruskal-Wallis tests for time-independent comparisons, and the log-rank test after reverse Kaplan-Meier analysis for time-dependent comparisons.

Results

Table 1. Publication rates and characteristics of oncology abstracts presented at AAOS, CTOS, and MSTS meetings.

	Meeting			Overall p value	Intergroup comparisons (p value) ^Δ		
	AAOS 2013-2015	CTOS 2012-2014	MSTS 2012-2014		AAOS / CTOS	AAOS / MSTS	CTOS / MSTS
Publication rate							
Podium	69% (66/96)	70% (127/181)	63% (87/138)	0.39			
Poster	61% (40/60)	54% (394/728)	48% (96/199)	0.04			
Both	65% (106/162)	57% (521/909)	54% (183/337)	0.06			
Published prior to meeting	24% (25/106)	10% (52/521)	14% (25/183)	< 0.01			
Time to publication (months) ^{**}	10.8 (4.4-18.8)	16.0 (8.4-25.9)	15.0 (7.9-25.0)	< 0.01	< 0.01	0.01	> 0.99
Journal impact factor (2015) [*]	2.9 (1.9-3.2)	3.7 (2.9-5.9)	3.1 (2.3-3.1)	< 0.01	< 0.01	> 0.99	< 0.01

^{*}Time to publication was calculated as the interval in days from first day of meeting to online publication and excludes abstracts published prior to the meeting. ^{**}Time to publication and journal impact factor are reported as median (interquartile range). ^ΔIntergroup comparisons were performed only for continuous variables after a Kruskal-Wallis test using Dunn's multiple comparisons test. AAOS indicates the American Academy of Orthopaedic Surgeons; CTOS, Connective Tissue Oncology Society; MSTS, Musculoskeletal Tumor Society.

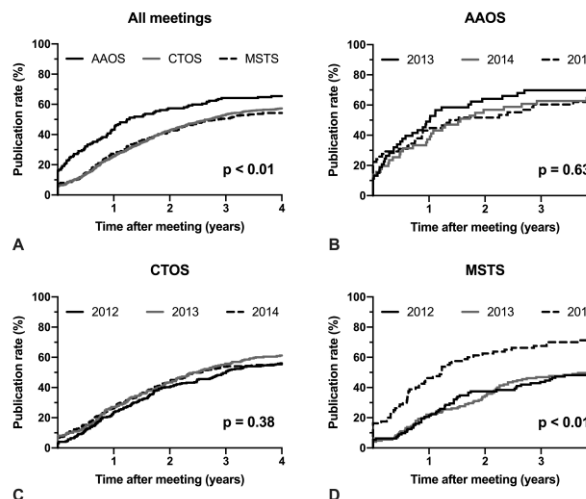


Figure 1 A-D. Publication rates over time for oncology abstracts presented at select AAOS, CTOS, and MSTS annual meetings are shown in (A). The publication rates over time are also shown for individual AAOS (B), CTOS (C), and MSTS (D) meetings. Time to publication was calculated as the interval from the first day of the meeting to online publication. Abstracts published prior to the first day of the meeting are depicted by the origin of each line on the y-axis.

Results

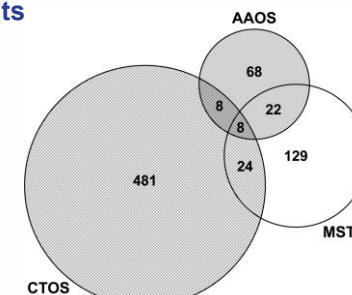


Figure 2. Overlap of published oncology abstracts presented at select AAOS, CTOS, and MSTS annual meetings. Depicted is an area-proportional Venn diagram, where the number of unique abstracts in each set is proportional to both the area of the circle and overlap. The number of unique abstracts in each set is also shown in text.

Conclusions

Characteristics of AAOS annual meetings:

- Higher poster publication rate
- Publication prior to meeting
- Shorter time to publication

CTOS:

- Longer time to publication
- Published in higher impact journals

MSTS:

- Change in publication rate over time

Despite these notable differences, there was no statistically significant difference in podium and overall publication rates between meetings (Table 1) or evidence of significant overlap in the information presented (Figure 2). Considering a reported publication rate of 41% for MSTS podium abstracts from 1991 to 1999, this study points to progress in the review processes used by the program committees and supports the continued organization of multiple scientific meetings in musculoskeletal oncology.