

A 30-Minute, Monthly, Live, Webinar-Based Journal Club Activity Alters the Self-Reported Behaviors of Dermatologic Surgeons

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BACKGROUND Journal clubs provide a way to communicate advances in recent literature. In outpatient surgical subspecialties, such as dermatologic surgery, physicians may face challenges in finding or attending meetings pertinent to their practice.

OBJECTIVE To assess the utility of a live web-based journal club in dermatologic surgery.

MATERIALS AND METHODS Monthly 30-minute journal club sessions covering 5 to 6 scholarly articles. Anonymous surveys were used to evaluate the utility and self-reported learning associated with each meeting.

RESULTS From December 2012 to February 2015, 117 articles were reviewed. Survey data were acquired monthly, apart from 5 months of missing data. On average, the survey response rate was 37% (range: 7%–82%), with an average of 17 participants per monthly session (range: 9–25). The mean monthly usefulness score was 83.7 (101-point scale), with participants scoring their likelihood of returning in the future as 96.2 (0 = not likely, 100 = extremely likely). At each session, a mean of 68% of participants felt that at least one article would change their practice of medicine.

CONCLUSION A monthly online and telephonic journal club may be a practical and effective way to inform dermatologic surgeons of new developments in high impact literature and may influence improvements in individual practice.

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For more than 100 years, journal clubs have been a means to further medical education.^{1,2} Apart from their didactic utility, journal clubs can be used to evaluate the effectiveness of physician and resident medical education, since participants' knowledge before and after such sessions may be assessed.³ As evidence-based medicine has become increasingly integral to medical education, journal clubs have become a venue for not only incorporating the most recent advances into daily practice but also for dissecting and assessing the quality of study

methodology.^{2,4,5} Moreover, journal clubs have become a program requirement for all Micrographic Surgery and Dermatologic Oncology fellowship programs.

There are obstacles to the creation and operation of dermatologic surgery journal clubs. Only one or a few dermatologic surgeons may be available at a particular physical venue. Additionally, reviewing the published literature for inclusion or exclusion in journal club may also be onerous for a single person.^{2,6,7} A webinar-based journal club inviting participation

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from multiple sites may help overcome these barriers. In this paper, we assess the usefulness of such a recently created journal club as assessed by the dermatologic surgeon participants.

Materials and Methods

Participants

Members of the Procedural Dermatology Section of the Association of Professors of Dermatology (APD) were invited to attend, with this expanded later to include all dermatologic surgery fellowship directors, and Accreditation Council for Graduate Medical Education and American Society of Dermatologic Surgery cosmetic fellows.

Journal Club Procedures

Online and telephonic monthly dermatologic surgery journal clubs occurred each month from December 2012 to February 2015, on Tuesdays from 9 to 9.30 PM EST. For each session, the organizers (I.A.M. and M.A.) selected or approved for presentation 5 to 6 scholarly articles from the recent literature in dermatology, plastic surgery, facial plastic surgery, oculoplastic surgery, oncology, and surgical oncology. The start of each journal club entailed participants entering the meeting space, based on the GoToMeeting platform, via phone and/or Internet. Narrative summaries and brief commentaries pertaining to each paper were provided by a dermatologic surgeon presenter for 2 to 3 minutes, followed by 2 minutes of interactive discussion among the participants.

Postsurvey of Participants

At the conclusion of each session, anonymous surveys were distributed to the participants (Figure 1). Survey questions were rated on a 100-point Likert scale, a scale often utilized in questionnaires to measure participant opinions or perceptions about a subject. Values near zero suggest a negative opinion (i.e., “not at all useful”), while those near 100 suggest a positive opinion (i.e., “very useful”). Respondents were asked to use this scale assess the appropriateness of the length of the program, its overall usefulness, and the usefulness and educational value of each individual article.

1. What was your opinion of the length of the program? (0=way too short, 50=about right, 100=way too long)
2. Overall, how useful did you feel the recent journal club was? (0=not useful, 50=somewhat useful, 100=very useful)
3. How useful/relevant to your practice did you find [name of article]? (0=not valuable, 100=extremely valuable)
4. Will any of the articles presented alter your practice of medicine? If so, what articles?
5. Will any of the articles presented alter your training of residents/fellows? If so, what articles?
6. How likely are you to participate in this journal club activity in the future? (0=not at all likely, 100=extremely likely)

Figure 1. List of survey questions distributed to participants at the conclusion of each webinar session.

Participants were next asked which, if any, articles would influence their own practice or the training of their residents or fellows. Absent responses were coded as negative—that is not influencing practice. Finally, participants were queried on whether they were likely to rejoin the journal club in the future. Journal articles were categorized based on subject matter: nonmelanoma skin cancer epidemiology, nonsurgical treatments, aesthetics, malignant melanoma, reconstruction, and a Mohs surgery specific category entitled “scope of Mohs.”

Data Analysis

Survey software was Redcap from December 2012 until June 2013, and Qualtrics from July 2013 until February 2015. Survey responses were recorded and compiled. Survey responses from each session were averaged (means), so that a single value was assigned to each question for a given month. Descriptive data were provided.

Results

From December 2012 to February 2015, a total of 117 articles were reviewed, and survey data were acquired monthly. Complete data were not available and data were not compiled for 5 months: October and December of 2013, and March, May, and June of 2014. On average, the survey response rate was 37% (range: 7%–82%), with an average of 17 participants per monthly session (range: 9–25). The mean monthly usefulness score was 83.7 (101-point scale), ranging from a low of 63.7 in August 2013 to a high of 98.5 in

TABLE 1. Average Practice Relevance Scores and SD by Article Category

<i>Article Category</i>	<i>No. of Scores</i>	<i>Mean Score</i>	<i>SD</i>
Aesthetic	157	67.8	24.3
Epidemiology	120	79.1	22.0
Melanoma	78	80.4	19.6
Nonsurgical Tx	66	72.4	26.2
Reconstructive	126	73.5	23.2
Scope of Mohs	69	78.4	20.4
Total	616	74.5	23.3

SD, standard deviation.

April 2013. Participants scored their likelihood of returning to future journal clubs as 96.2 (0 = not likely, 100 = extremely likely). Per journal club, 68% of participants felt that at least one article would change their practice of medicine.

The number of articles associated with each major topic was as follows: 27, aesthetic; 27, NMSC epidemiology; 26, reconstructive; 14, nonsurgical treatments; 12, melanoma; and 11, "scope of Mohs." Average ratings for practice relevance for each article can be found in Table 1. Articles in 3 categories, epidemiology ($p = .001$), melanoma ($p = .001$), and scope of Mohs ($p = .017$), were found to be significantly more likely to change practice than those in the aesthetic category.

Table 2 shows participant responses regarding likely impact on future resident training. The "scope of Mohs" category had the highest percentage of articles

likely to influence resident training (20.5%), and the aesthetic and nonsurgical treatment categories had the fewest (15.1%, 15.2%).

Discussion

This study provided data regarding the utility of a monthly web-based journal club for dermatologic surgeons and their trainees. Overall, the activity received positive responses from attendees, with the majority stating that they would be very likely to return in the following months. Usefulness ratings were also very high, suggesting that participants found the activity to be of educational value.

Each of the 6 article categories received mean scores above the 50-point mark associated with "somewhat useful," thus indicating that they were of value to participants. All articles, with the exception of those in the aesthetic category, were found to be no different in terms of their likely impact on current and future practice. The relatively lower perceived impact of aesthetic papers may be attributable to the composition of the participant group, who were mostly surgeons with practices focused on skin oncology or trainees in micrographic surgery. Alternatively, it may be that participants were already aware of the findings of these manuscripts through other means such as meeting abstracts or lectures.

At least one article a month was noted to be likely to influence resident training. Those papers were overall slightly less likely to impact resident training than clinical

TABLE 2. Number of Times an Article Was Selected as Either Influencing Resident Training or Having No Effect on Resident Training

<i>Article Category</i>	<i>Score = 0 (Not Selected to Change Resident Training)</i>	<i>Score = 1 (Would Change Resident Training)</i>	<i>Total Participant Responses</i>	<i>% Positive Responses</i>
Aesthetic	141	25	166	15.1
Epidemiology	101	24	125	19.2
Melanoma	65	15	80	18.8
Nonsurgical Tx	67	12	79	15.2
Reconstructive	108	23	131	17.6
Scope of Mohs	58	15	73	20.5
Total	540	114	654	17.4

practice may derive from a desire for a greater level of evidence before instituting change in training curricula.

Study data were limited in part by the low survey response rates each month. Fewer than half of the participants chose to respond after any given session. Further, since surveys were sent out in the days following the journal club, the long-term retention of information and actual behavioral change associated with this activity cannot be assessed from our results.

Since the study data were collected, a mechanism has been developed to award CME credit for participation in the journal club. This may be an additional incentive to attend for those needing to comply with CME requirements for medical licensure. Moreover, as the journal club participant list has grown over time, those tuning in have an opportunity to benefit from the comments, questions, and wisdom of an ever-enlarging community of dermatologic surgeons. The addition of mobile application access to the Journal Club should allow for increased ease of use and reach for the activity. Development of a mechanism for non-live viewing would further extend this reach.

To conclude, the creation of an online journal club catering to dermatologic surgeons appears to be a useful endeavor, providing physicians with

a convenient and time-effective way to augment their medical knowledge and to keep their practices up-to-date as advances are made in the field.

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