# **CONCISE REPORT**

# Most visits of most patients with rheumatoid arthritis to most rheumatologists do not include a formal quantitative joint count

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**Objective:** To ask rheumatologists about the likelihood of performing a formal joint count at each visit of a patient with rheumatoid arthritis (RA) in standard clinical care.

**Method:** Direct query of rheumatologists at an international meeting of about 600 rheumatologists from 17 European countries.

**Results:** Overall, 14% of rheumatologists reported performing a formal joint count at each visit of each patient, and 44% of rheumatologists reported performing a formal joint count at more than 50% of visits of patients with RA. Therefore, 56% of rheumatologists reported performing a joint count at fewer than 50% of visits, including 45% at fewer than 25% of visits. One in eight rheumatologists (13%) reported never performing a formal joint count.

**Conclusion:** Although the joint count remains the most specific measure for RA, most visits of most patients with RA to most rheumatologists do not include a formal quantitative joint count.

count of swollen and tender joints is the most specific quantitative clinical measure to assess and monitor the status of patients with rheumatoid arthritis (RA). Joint counts for assessment of patients with RA include the Lansbury Index (see Fuchs et al2), Ritchie Articular Index,3 American Rheumatism Association Glossary Committee Joint Count,4 36 joint count (see Fuchs et al2), and 28 joint count.  $^{\tiny 2\ 5\ 6}$  Swollen and tender joint counts are components of the American College of Rheumatology (ACR) core dataset for clinical trials in RA,7 and improvement in joint scores is required to meet ACR improvement criteria.8 Joint counts are regarded by rheumatologists as the most important measure to assess in clinical trials and clinical care.9 Indeed, clinically detectable inflammation antedates structural damage of joints,10 and rheumatologists are urged to include a joint count at each visit of each patient.11

As is the case for all clinical measures, the joint count has limitations. Although most visits to rheumatologists include a careful joint examination, a formal joint count is somewhat time consuming and tedious. The reliability of the joint count is limited, <sup>12</sup> and it is the ACR core dataset measure most likely to improve with placebo treatment in clinical trials. <sup>13</sup> Informal observations had suggested that a formal joint count is often not included in many visits of patients with RA to rheumatologists.

We had an opportunity to survey about 600 European rheumatologists about the likelihood of their performing a joint count at visits of patients with RA. The results suggest that the majority of visits do not include a formal joint count, as presented in this report.

## **METHODS**

A meeting of about 600 rheumatologists from 17 European countries was conducted to introduce adalimumab and review advances in biological treatments. These rheumatologists were known to the sponsor, Abbott Laboratories, but no selection criteria were used in inviting them to the meeting. During the course of presentations at this meeting, keypads were available for rheumatologists to respond to queries, with rapid electronic tabulation of their responses.

A question was presented to the rheumatologists: "Across all routine visits of patients with RA under your care (not including clinical trials), what percentage of these visits includes a formal tender and swollen joint count?" Six response options were offered: (1) never, (2) 1–24% of visits, (3) 25–49% of visits, (4) 50–74% of visits, (5) 75–99% of visits, (6) always. These responses were tabulated electronically at the meeting.

### **RESULTS**

Responses were obtained from 550 rheumatologists (table 1). Self report responses about performance of formal tender and swollen joint counts (fig 1) included: never, 13%; 1–24% of visits, 32%; 25–49% of visits, 11%; 50–74% of visits, 14%; 75–99% of visits, 16%; always, 14%.

Overall, a formal joint count was performed at fewer than one in four visits of patients with RA by 45% of rheumatologists in this survey. An additional 11%—giving a total of 56%—reported performing a formal joint count in fewer than half of the visits. Therefore, only 44% of rheumatologists reported performing a formal tender and swollen joint count at 50% or more of the visits. A similar number, 13%, reported never performing a formal joint count as the 14% who reported performing a joint count at all visits.

### DISCUSSION

It may appear desirable that a formal quantitative joint count is performed at each visit of each patient with RA to a rheumatologist.<sup>11</sup> Incentives may be provided, including a requirement for a formal joint count before administration of certain treatments, or even payment for performance of a joint count. However, at this time, most rheumatologists do not assess a formal joint count at most visits.

Perhaps many rheumatologists feel that they can estimate disease activity qualitatively, and use the time required for a formal joint count in many patients more effectively to counsel the patient about problems and treatments. Physicians are primarily data interpreters, rather than data measurers, generally expending most effort in patient encounters on how the to treat the patient, based on an overall impression, rather than on a particular number of joints. Furthermore, the reliability (reproducibility) of joint counts is limited, although it may be improved with training and by having the same assessor at each visit.<sup>12</sup>

Country	No	
Australia	2	
Austria	24	
Belgium	13	
Brazil	22	
Canada	10	
Czech Republic	8	
Denmark .	16	
England	81	
Finland	16	
France	67	
Germany	84	
Greece	14	
Ireland	15	
Italy	46	
Mexico	4	
Netherlands	19	
Norway	22	
Portugál	16	
Spain	47	
Sweden	24	
Total	550	

Data collected on keypads may appear superficially not to be "scientific," as keypads generally have been included at meetings primarily to enhance audience involvement, rather than to answer research questions. Certainly, a more thorough collection of ancillary data, such as respondent's age, country of origin, practice setting, etc, would be of value. At the same time, the response rate reported here of >80% is substantially higher than the 20–50% response rates seen in most mailed or telephone surveys of rheumatologists. Furthermore, keypad technology is as accurate as any computer entry method. Perhaps this report might encourage rheumatologists who use keypads and sponsors to take advantage of an opportunity to collect data of more general interest for further analysis and reports to the rheumatology community.

Several limitations are seen in this study. Firstly, the data are from self report by rheumatologists rather than actual observation of performance or review of medical records. However, it is likely that self report estimates by rheumatologists may overestimate rather than underestimate performance of a joint count (whether responding to keypads, mail or telephone surveys, or interviews), perhaps quite substantially. Secondly, the participating rheumatologists were not necessarily a random sample, but were selected for attendance at a meeting by a pharmaceutical company. However, it is likely that their interest in management of RA was at least as great as rheumatologists chosen randomly. Thirdly, as noted above, no information was available about the characteristics of the physicians who might have performed frequent versus infrequent (or no) formal joint counts, such as age, country or origin, practice setting, etc. Further research into the characteristics of rheumatologists who perform joint counts frequently or not may be of interest, particularly if rheumatologists are to meet calls for performance of a joint count at each visit.11

Formal joint counts remain the most specific measure to assess RA, and it appears desirable to maintain these specific measures in clinical trials. However, indices of patient measures only, without joint counts, appear to differentiate responses to active versus placebo treatment as effectively as joint counts. <sup>14</sup> In standard clinical care, therefore, a patient questionnaire may provide as sensitive a method as a joint count to obtain similar information, with greater reliability at

Across all routine visits of patients with RA under your care (not including clinical trials), what % of these visits includes a formal tender and swollen joint count?

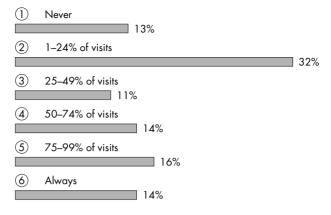


Figure 1 Self report responses for performance of formal tender and swollen joint counts.

a lower cost. Furthermore, patient questionnaires are better than joint counts for predicting severe outcomes, such as work disability and survival in patients with RA.<sup>15</sup> The intuition of many rheumatologists that formal joint counts may not be needed in standard clinical care may be valid. Collection of quantitative data from patient questionnaires might add to optimal monitoring and management of patients with RA.

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