

Contemporary publication patterns in the Journal of Cachexia, Sarcopenia and Muscle by type and sub-speciality: facts and numbers

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Introduction

The Journal of Cachexia, Sarcopenia and Muscle (JCSM) has progressed significantly in the past three years, not only both in terms of its number of submitted and published articles but also in terms of greater impact, reaching an Impact Factor of over 12 in the most recently published analyses by Clarivate Analytics. It remains the leading specialist journal in this new but now rapidly expanding field, and it appears to cover the full spectrum of research from basic science, to clinical observations and randomized controlled trials (RCT's) and meta-analyses.

To investigate the fields covered and analyse contemporary patterns of output in the different subspecialist fields of cachexia and related areas (sarcopenia, muscle wasting, and body composition) we analysed output from the journal over the last 3 years, including this issue. We conducted an analysis of the types of publications in the respective medical sub-specialities that this major cachexia focussed journal, JCSM, has published in the last three calendar years and analysed trends within each sub-discipline. Publications are classified into (i) original research articles (clinical observations), (ii) original research articles (translational science), (iii) randomized controlled trials (RCT's) or meta-analyses of RCT's, and (iv) opinion pieces or commentaries. Furthermore, they are classified into the major medical sub-specialities (including ageing) or are considered multidisciplinary if applicable across a range of specialities.

Results

Significant research and commentary have been published in the last three years in a significant expansion of the area; 264

articles were identified in the journal. We subdivided articles by sub-speciality into the following: general cachexia (or multi-speciality), cancer, cardiovascular, respiratory, renal, liver, neuromuscular, ageing, and other (mainly rheumatology). Papers were further subdivided by type as described above.

By discipline

The most frequent classification was general or multidisciplinary cachexia with 80 publications, with the most common types being original basic science (36) and clinical observational studies (19), noting that this area had a very large number of commentary style articles (22). The most commonly published subspecialty was cancer with 73 publications in the period and within this, by type, the most frequent were clinical observational studies (35) and original basic science (21), but also encouragingly as this field develops, here we saw the most of the RCT's or meta-analyses of RCT's type, 11 out of a total for all fields of 29. Ageing was next most frequent sub-discipline with a total of 54 publications, with 35 clinical observational studies, 10 original basic science, and 6 RCT's or meta-analyses. The other sub-disciplines were significantly less frequently published in the period: others (mainly musculoskeletal trauma or rheumatology) 14, renal 12, respiratory 9, neuromuscular disorders and liver disease 8 each, and cardiovascular 6.

By methodology

The range of approaches was impressive and diverse with large scale clinical series¹ articles on informative clinical

series,² RCT's and meta-analyses of physical,³ pharmacological,^{4,5} and nutritional interventions^{6,7} as well many basic science reports and reviews. For the first time, the journal was seeing Cochrane reviews of the evidence base for interventions in cachexia and related fields coming through.^{8,9} One of the strongest emerging fields are detailed clinical series of ageing effects, both detailed physiological evaluations^{10,11} and large scale cohort reports.^{12–17} In the area of translational studies in the mechanisms of cachexia, studies were published on expression of spliced skeletal muscle genes,¹⁸ along with scientific evaluations of skeletal muscle physiology,^{19,20} growth, wasting,^{21–23} preservation,^{24,25} and regeneration.²⁶ Basic science approaches were also used to study the growing interest in the cardiac and cardio-metabolic effects of cancer-related cachexia and of modern cancer therapies.^{27,28}

There was growing evidence for the development of clinical trials and for improvements in clinical trial methodology by the development and validation of clinical screening tools²⁹ and scoring systems,³⁰ biomarkers,^{31,32} and evaluative methodologies, including the establishment of normal ranges.³³ These may help make trial design and novel treatment evaluation more precise in the future.

The future pipeline of therapeutic interventions will be enhanced by the dissemination of basic reports into preclinical models^{34–37} and early human trials³⁸ as a way of evaluating novel interventions.^{39–42} One of the major advantages of having JCSM as a leader in this field is that such opportunities can more easily be found, rather than being spread over dozens of different journals.

There was a noticeable increase compared to earlier years of the journal in orthopaedic and musculoskeletal clinical reports.⁴³ Liver disease^{44–46} and chronic kidney disease^{47–49} are two other areas showing growth in interest in cachexia and its treatment.

Detailed pathophysiology was the subject of many reports into what happens in specific cachexia syndromes^{50–56} and in other non-cancer-related cachexia and sarcopenia syndromes.^{57–63}

As befits a series of fields that are relatively new and not the main speciality of many practitioners, there was a large number of informative review articles,^{64–71} as well as the emergence of reports on patient groups, commentaries, and political campaigns.⁷²

Conclusions

The Journal of Cachexia, Sarcopenia and Muscle (JCSM) is maintaining a broad coverage of cachexia and sarcopenia research, across the spectrum of basic science, clinical observation, interventional trials, and public health epidemiology. There is broad coverage of many sub-disciplines, and although still led by cancer related and non-specific cachexia ageing is now emerging as a major area of focus for the journal.

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Conflict of Interest

The author declares that no conflict of interest relevant to this article exists.

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