

# WOMEN FOR ONCOLOGY

An ESMO Initiative

## ESMO Women for Oncology (W4O) authorship study

### Executive Summary

The main objective of the ESMO Women for Oncology (W4O) authorship study is to monitor the representation of women as authors of publications in major oncology journals. It complements the W4O analysis of the representation of women as invited speakers at national/international oncology congresses and on the boards of oncology societies. Together, these studies provide a detailed picture of the impact of women on oncology research, raise awareness about possible gender inequalities, and promote equal access to career development opportunities for female oncologists. The collected data refer to the year 2017 and relate to the five oncology journals with the greatest journal rank indicator (“Cancer Journal for Clinicians”, “Nature Reviews Cancer”, “The Lancet Oncology”, “Cancer Cell” and “Journal of Clinical Oncology”, respectively).

In the primary analysis of **first authors**, based on 1771 first authors/co-authors, **38% were female**. The proportion of female oncologists, as first authors, varied significantly among the five oncology journals. For example, in “Cancer Journal for Clinicians” and “Nature Reviews Cancer”, over 50% of first authors were women. However, women were under-represented in the sections of journals with the largest volume of publications (Articles and Comments), with 36% and 29% respectively authored by women.

The gender of first authors was significantly associated with their primary affiliation, with 32% of first authors from Cancer Research Organisations being female, 36% of those from Universities and 29% from Teaching Hospitals. Only for first authors described as Journal Editors were there more women than men (77% vs 23%). When data were analysed according to region/country, 36% of first authors affiliated to institutions in America were women followed by 30% in Europe. As an indication of the productivity and impact of female research, an analysis was carried out of first author citations (h-index) and this was found to be significantly higher for men than women (median h-index: 25 and 15 respectively).

In the analysis of **last authors**, based on 852 last authors/co-authors, **30% were female**. Women were again under-represented in analyses by journal, section of journal, affiliation and region/country. However, in contrast to first author analyses, associations of gender with these parameters were not statistically significant.

Furthermore, female authors were significantly more likely to be first than last authors (38% vs 30%,  $p < 0.001$ ) indicating their typical role as a co-worker (first author) rather than leader (last author) of a study.

In conclusion, this study demonstrates the widespread under-representation of women as first and last authors of publications in leading cancer journals – a finding that is in line with previous W4O studies indicating under-representation of female oncologists in leadership roles.