# Miami Cancer Institute 

Roselle C. Okubo, RN¹, Sarah N. Joseph, MD¹, Ana C. Belzarena, MD ${ }^{1}{ }^{1}$ Miami Cancer Institute, Miami, FL, USA

## Introduction

- The number of females in medicine has increased in the past few years, still remains low in orthopedic surgery (10-15\%)
Oncology orthopedics is also not a very popular choice among females who apparently choose hand, foot and ankle or pediatric orthopedics more.
The number of females in oncology orthopedics has also remained low at 6-7.6\%.
- In other areas of medicine, even when the female numbers increase, female colleagues continued to be underrepresented in leadership positions as well as when presenting in conferences.
The proportion of females presenting, as guest speakers and as senior authors are inferior to the number they represent in the workforce,


## Purpose

To assess if women were proportionally represented in the percentage of presenting authors, senior authors and guest speaker roles in Oncology Orthopedics conferences.

- Additionally, the study aims at assessing if there were any changes in the trend of those numbers in the past five years.



## Methods and Materials

- The final conference programs of the most important oncology orthopedics conferences, from 2015-2019 were analyzed.
- Final programs of the MSTS conference were assessed for number of females presenting, female senior authors, female moderators and female guest speakers.
- For the year 2015, MSTS was combined with ISOLS, thus the combined program was used for analysis.

Observed proportions of women in leadership positions compared with the expected proportion of overall faculty were assessed.

- Rates of representation of women across each year based on the presence or absence of a woman in research leadership positions were compared
- A value of $P<0.05$ was considered statistically significant
- Over 350 papers presented in the last 5 years (2015-2019) were assessed ( $\mathrm{N}=364$ ).
- The percentage of female presenting authors varied over the years, with 2017 being the year with least female presenters, only 13.4\%. The same occurred with females as first authors, with only 6 of the 47 papers being presented by a woman in 2017
- The percentage of female moderators has remained stable over time, with a maximum of $33.3 \%$ in 2016 versus $9.4 \%$ in 2015. - The number of females as senior authors in the papers presented, continued the trend with a minimum in 2017 with only $6.4 \%$ of the manuscripts.
- None of the conference presidents or chair were females.
- For the percentage of female oncology orthopedists, the numbers do not show an underrepresentation in most categories except conference chair and conference president.

Discussion

- Gender disparity is known to exist in the academic setting which is magnified at the faculty and chair level.
Women enrolling in US medical schools exceeds the number of men, women remain underrepresented in academic medicine.

There is a necessity towards providing mentorship and advancement initiatives for women and to incorporate women into all levels of oncology orthopedics.


## Conclusions

- Gender disparity exists in the academic practice locations in many areas of medicine, which is magnified at the research production level.
The impact that can be attained from using the potential of women in leadership roles is currently under appreciated in many areas of this field.
Even though females are underrepresented in orthopedic surgery (10-15\%) and even more in oncology orthopedics (6-6.7\%) compared to the male counterparts, they attain higher percentage of representation in conference leadership positions.


## Contact

Ana Belzarena
Miami Cancer Institute
8900 N Kendall Dr, Miami, Florida, 33176
ceciliabel@baptisthealth.net
786-596-2000

## References

Lind L L, Davis UC, Irvine UC, Atlanticschmidt F: Table A-1: U. S. medical school applications and matriciclants by school, state of legal residence, and sex, 2015-2016. 2016:2015-6.


 $2015 ; 38: 175-179$.
Pico $K$, Gioe $T J$, Van
Pico K, Gioe Th, Vanhest A, Tatman PJ. Do men outperform women during orthopaedic residency training? Clin Orthop Relat Res. 2010;468:1804-1808.
WHO Sopitight on statistics. Gender and heatth workforce statisticis, 2008.
Conection
Connection A. Asco women in on acology: breaking down batrierits sand looking to the future, 2016:14-19.


