Scholarly Productivity in U.S. Academic Musculoskeletal Radiology Faculty: Clinical vs Tenure/Research Track Analysis

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BACKGROUND

- Clinical and tenure/research faculty tracks carry different expectations for scholarship.
- Academic promotion frameworks still consider publications, citations, and h-index.
- It remains unclear whether bibliometric differences reflect appointment track or career stage.
- Question: How do publications, citations, and h-index differ by faculty track across academic ranks?

METHODS

- Cross-sectional bibliometric study of U.S. academic MSK radiology faculty.
- Faculty identified from ACGME directory and Society of Skeletal Radiology fellowship program list.
- Rank: assistant, associate, or full professor; track: clinical vs tenure/research based on public institutional titles.
- Scopus metrics: publications, citations, h-index; academic age defined as years from first indexed publication to 2025.
- Track comparisons within each rank used Mann-Whitney U tests.

TAKE-HOME MESSAGES

- Clinical-track assistant professors had higher bibliometrics than tenure/research peers; no differences were observed at the associate professor level, whereas tenure/research-track full professors had higher publication counts.
- Academic age and academic rank explained nearly all variability in publications, citations, and h-index among U.S. academic MSK radiology faculty.

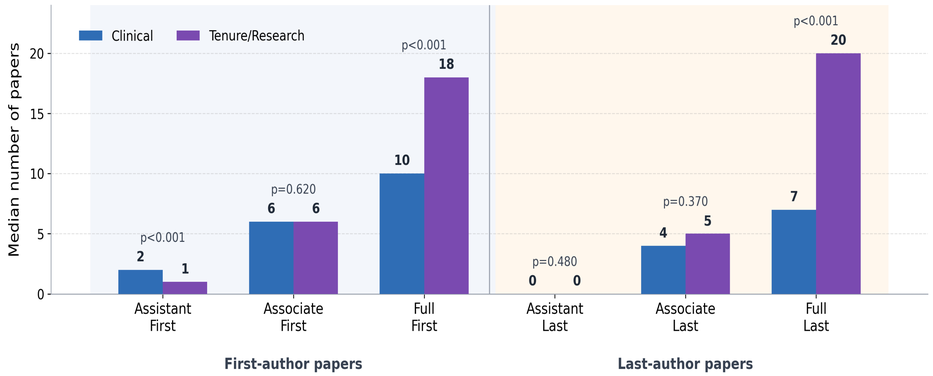
RESULTS

Final cohort: 610 U.S. academic MSK radiology faculty (259 clinical [42.5%]; 351 tenure/research [57.5%])

Academic rank	Metric	Clinical	Tenure/Research	P value
Assistant Professor	Papers	6.0 [2.0-17.0]	3.0 [1.0-8.0]	**<0.001**
Assistant Professor	Citations	45.0 [1.0-261.0]	18.0 [1.0-125.8]	**0.006**
Assistant Professor	H-index	3.0 [1.0-6.0]	2.0 [1.0-4.0]	**0.003**
Associate Professor	Papers	15.0 [4.2-25.0]	12.0 [7.0-28.5]	0.39
Associate Professor	Citations	186.5 [52.2-569.8]	203.0 [66.5-517.5]	0.665
Associate Professor	H-index	7.0 [2.2-10.0]	7.0 [4.0-11.5]	0.475
Full Professor	Papers	47.0 [25.2-95.2]	88.5 [42.8-159.5]	**0.004**
Full Professor	Citations	1197.5 [520.8-2498.5]	2209.5 [532.5-5190.2]	0.111
Full Professor	H-index	17.0 [11.0-27.2]	25.0 [12.0-39.0]	0.056

Data are median [IQR]. P values are from Mann-Whitney U tests comparing tracks within each rank.

Aauthorship graph



DISCUSSION

- Track-related productivity differences were not uniform and depended strongly on academic rank.
- Clinical-track assistant professors may engage earlier in collaborative or educational projects that yield publications.
- Tenure/research-track full professors may benefit from later-career research leadership, mentorship, and protected research time.
- Promotion review may benefit from interpreting bibliometrics in relation to career stage and authorship role rather than applying fixed thresholds across tracks.

CONCLUSIONS

Scholarly productivity differed by track in a rank-specific pattern.
Clinical-track assistant professors had higher publications, citations, and h-index.
No track-related differences were observed among associate professors.
Tenure/research-track full professors had higher publication counts.
Overall, scholarly productivity appears more strongly related to career stage than to faculty track alone.

REFERENCES

Selected: Malhotra et al. Acad Radiol 2025; Zaorsky et al. Acad Med 2020; Chapman et al. Pediatr Radiol 2023; Rezek et al. Acad Radiol 2011; Lam et al. J Surg Res 2018; Kwiek & Roszka Higher Educ 2024.