

BACKGROUND

Medical imaging plays a pivotal role in diagnostic decision-making and publications serve as a key medium for communicating new imaging information. H&N imaging is used to diagnose many conditions, but despite the numerous indications for imaging, we theorize H&N papers are published less often compared to other imaging sites.

OBJECTIVE

We aimed to analyze imaging content by anatomical site of three major radiology journals and discover any quantitative discrepancies.

METHODS

Imaging articles published by 3 major radiology journals (JACR, AJR, RSNA Radiology Journal) from 2020 to 2023 were reviewed. Using keywords specific to each imaging site (H&N, Breast, Cardiac, Gastrointestinal (GI) & Renal, Male & Female Reproduction, Neurology, and Thoracic), 2226 articles were identified and included. A Chi-Square test of equal proportions was used to compare paper density by site.

Category	Frequency (N)	Percent (%)	H&N Comparison
Head & Neck	149	6.7	-
Breast	521	23.4	3.5
Cardiac	158	7.1	1.1
GI/Renal	240	10.8	1.6
Repro	271	12.2	1.8
Neuro	228	10.2	1.5
Thoracic	659	29.6	4.4
Total	2226	100.0	



Table 1. Frequency & Percentage by Primary Site

Category	Observed N
Head & Neck	149
Breast	521
Cardiac	158
GI & Renal	240
Reproductive	271
Neuro	228
Thoracic	659

Table 2. Chi-Square Test of Equal Proportions by Primary Site (expected N=318)

Chi-Square	717.119
DF	6
Significance	<0.001
Sample Size =	2226

Table 3. Chi-Square Results

RESULTS

Thoracic imaging comprised most papers (29.6%), while H&N imaging was least frequent (6.7%). Compared to H&N papers, thoracic, breast, reproductive, GI/renal, neurology, and cardiac papers appeared 4.4, 3.5, 1.8, 1.6, 1.5, and 1.1 times more often, respectively (Table 1). The expected number of articles in each group was 318, which differed significantly from observed values ($p < 0.001$) (Tables 2 & 3).

CONCLUSIONS

Papers on H&N imaging were published less often than any other anatomical site. This could indicate publication bias, where studies reporting positive or significant data are more likely to be published. However, negative or non-significant results can also impact clinical decision-making. The amount of literature on H&N studies available to clinicians is significantly less than any other primary site, which creates a false importance on already-published H&N studies and distorts the significance of this group. H&N radiology manuscripts may be published more often in subspecialty journals, which were excluded from this study, but not every physician has access to or awareness of subspecialty journals. Further studies should address the cause of this literature gap and explore publication hurdles faced by H&N radiology manuscripts.