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Journal of Surgical Research

Supports open access

3.4
CiteScore

1.7
Impact Factor

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JCR Year 2024

JOURNAL OF SURGICAL RESEARCI

ISSN

0022-4804

EISSN

1095-8673

JCR ABBREVIATION

J SURG RES

ISO ABBREVIATION

J. Surg. Res.

Journal information

EDITION

Science Citation Index Expanded (SCIE)

CATEGORY

SURGERY

LANGUAGES	REGION	1ST ELECTRONIC JCR YEAR
English	USA	1997

Publisher information

PUBLISHER	ADDRESS	PUBLICATION FREQUENCY
ACADEMIC PRESS INC ELSEVIER SCIENCE	525 B ST, STE 1900, SAN DIEGO, CA 92101-4495	12 issues/year

Journal's performance

Journal Impact Factor

The Journal Impact Factor (JIF) is a journal-level metric calculated from data indexed in the Web of Science Core Collection. It should be used with careful attention to the many factors that influence citation rates, such as the volume of publication and citations characteristics of the subject area and type of journal. The Journal Impact Factor can complement expert opinion and informed peer review. In the case of academic evaluation for tenure, it is inappropriate to use a journal-level metric as a proxy measure for individual researchers, institutions, or articles. Learn more

2024 JOURNAL IMPACT FACTOR	JOURNAL IMPACT FACTOR WITHOUT SELF CITATIONS
1.7	1.6
View calculation	View calculation

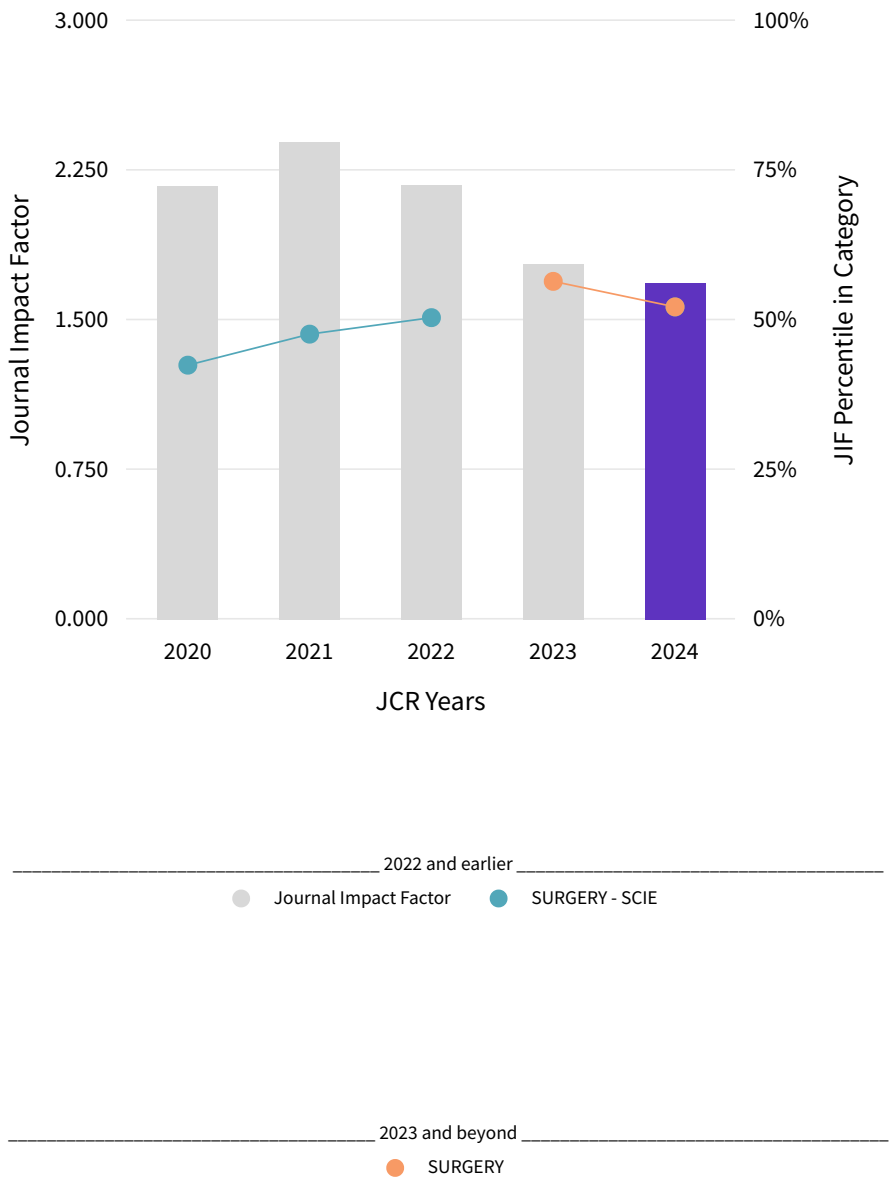
Journal Impact Factor Trend 2024 Export

Journal Impact Factor contributing items Export

Citable items (1,216) Citing Sources (824)

TITLE	CITATION COUNT
Surgical Rib Fixation of Multiple Rib Fractures and Flail Chest: A Systematic…	18
A 5-Year Analysis of the Integrated Plastic Surgery Residency Match: The Most…	17

Yardım



A Systematic Review of Simulation-Based Training in Vascular Surgery	17
Current Views on the New United States Medical Licensing Examination Step 1…	17
The Association of Limited English Proficiency With Morbidity and Mortalit…	17
A Systematic Review of the Reported Complications Related to Facial and…	12
Outcomes of Transfusion With Whole Blood, Component Therapy, or Both in…	12
The Measurement of Cognitive Workload in Surgery Using Pupil Metrics: A…	12
Eye Tracking Use in Surgical Research: A Systematic Review	11
Society of Asian Academic Surgeons Gender and Racial/Ethnic Disparities in…	10

View All in Web of Science

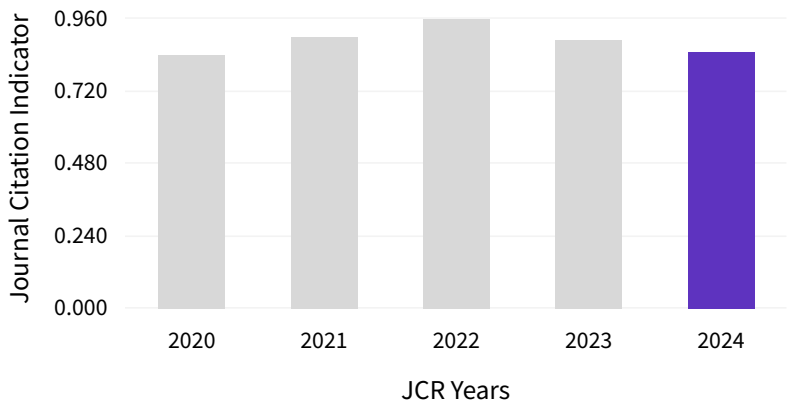
View all years

Journal Citation Indicator (JCI)

Export

0.85

The Journal Citation Indicator (JCI) is the average Category Normalized Citation Impact (CNCI) of citable items (articles & reviews) published by a journal over a recent three year period. The average JCI in a category is 1. Journals with a JCI of 1.5 have 50% more citation impact than the average in that category. It may be used alongside other metrics to help you evaluate journals. Learn more



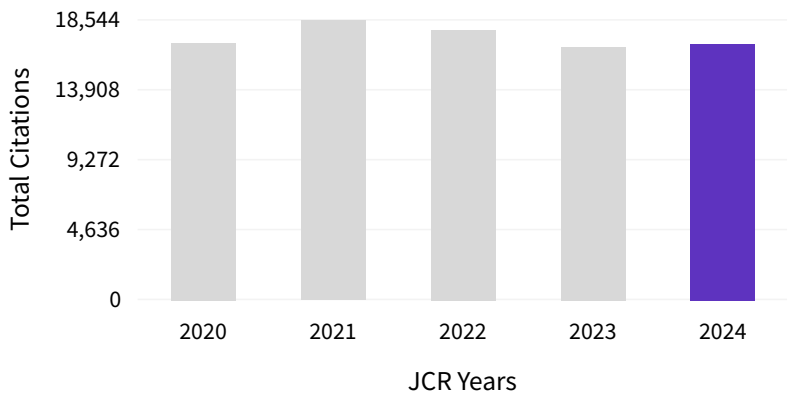
View all years

Total Citations

Export

16,974

The total number of times that a journal has been cited by all journals included in the database in the JCR year. Citations to journals listed in JCR are compiled annually from the JCR years combined database, regardless of which JCR edition lists the journal.



View all years

Citation distribution

Export

The Citation Distribution shows the frequency with which items published in the year or two years prior were cited in the JCR data year (i.e., the component of the calculation of the JIF). The graph has similar functionality as the JIF Trend graph, including hover-over data descriptions for each data point, and an interactive legend where each data element's legend can be used as a toggle. You can view Articles, Reviews, or Non-Citable (other) items to the JIF numerator. Learn more

ARTICLE CITATION MEDIAN

1

REVIEW CITATION MEDIAN

2

UNLINKED CITATIONS

39

TIMES CITED

0

ARTICLES

408

REVIEWS

18

OTHER

28

Open Access (OA)

Export

The data included in this tile summarizes the items published in the journal in the JCR data year and in the previous two years. This three-year set of published items is used to provide descriptive analysis of the content and community of the journal. Learn more

Items

TOTAL CITABLE	% OF CITABLE OA
1,887	6.47%

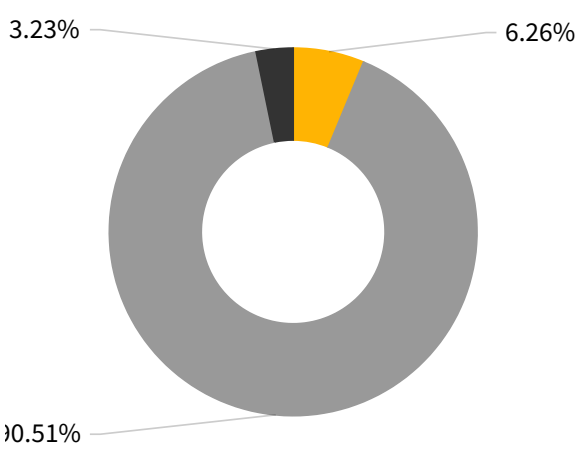
Citations*

TOTAL CITABLE	% OF CITABLE OA
2,215	8.40%

CITABLE

GOLD OPEN ACCESS
122 / 6.26%

SUBSCRIPTION AND FREE TO READ
1,765 / 90.51%



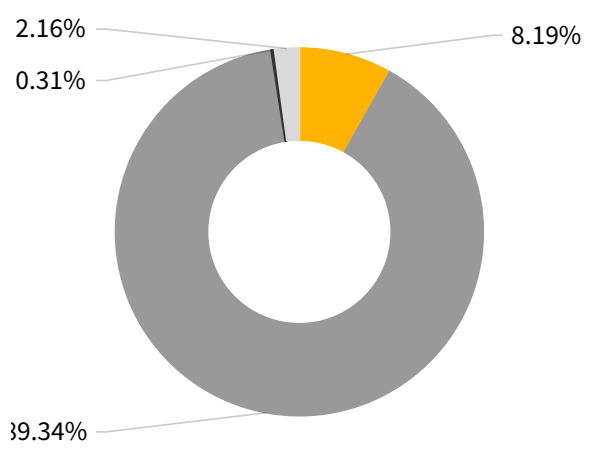
NON-CITABLE

OTHER (NON CITABLE ITEMS)
63 / 3.23%

CITABLE

GOLD OPEN ACCESS
186 / 8.19%

SUBSCRIPTION AND FREE TO READ
2,029 / 89.34%



NON-CITABLE

OTHER (NON CITABLE ITEMS)
7 / 0.31%

UNLINKED CITATIONS
49 / 2.16%

*Citations in 2024 to items published in [2022 - 2024]

Rank by Journal Impact Factor

Journals within a category are sorted in descending order by Journal Impact Factor (JIF) resulting in the Category Ranking below. A separate rank is shown for each category in which the journal is listed in JCR. Beginning in 2023, ranks are calculated by category.
Learn more

CATEGORY
SURGERY

149/314

JCR YEAR	JIF RANK	JIF QUARTILE	JIF PERCENTILE
2024	149/314	Q2	52.7
2023	126/292	Q2	57.0

Rank by JIF before 2023 for SURGERY

EDITION
Science Citation Index Expanded (SCIE)

JCR YEAR	JIF RANK	JIF QUARTILE	JIF PERCENTILE
2022	105/213	Q2	50.9
2021	111/213	Q3	48.12
2020	121/211	Q3	42.89
2019	110/210	Q3	47.86

Rank by Journal Citation Indicator (JCI)

Journals within a category are sorted in descending order by Journal Citation Indicator (JCI) resulting in the Category Ranking below. A separate rank is shown for each category in which the journal is listed in JCR. Data for the most recent year is presented at the top of the list, with other years shown in reverse chronological order. Learn more

CATEGORY

SURGERY

106/314

JCR YEAR	JCI RANK	JCI QUARTILE	JCI PERCENTILE
2024	106/314	Q2	66.40
2023	87/292	Q2	70.38
2022	70/286	Q1	75.70
2021	82/282	Q2	71.10
2020	94/271	Q2	65.50
2019	86/270	Q2	68.33
2018	76/267	Q2	71.72

Citation network

Cited Half-life

7.7 years

The Cited Half-Life is the median age of the items in this journal that were cited in the JCR year. Half of a journal's cited items were published more recently than the cited half-life.

TOTAL NUMBER OF CITES

16,974

NON SELF-CITATIONS

16,494

SELF-CITATIONS

480

Citing Half-life

7.5 years

The Citing Half-Life is the median age of items in other publications cited by this journal in the JCR year.

TOTAL NUMBER OF CITES

20,625

NON SELF-CITATIONS

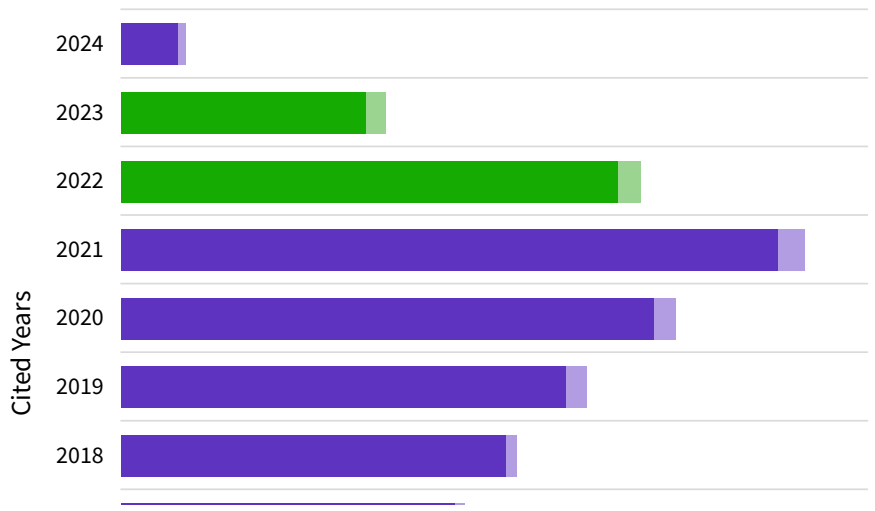
20,145

SELF-CITATIONS

480

Cited Half-life Data | Citing Half-life Data

Export

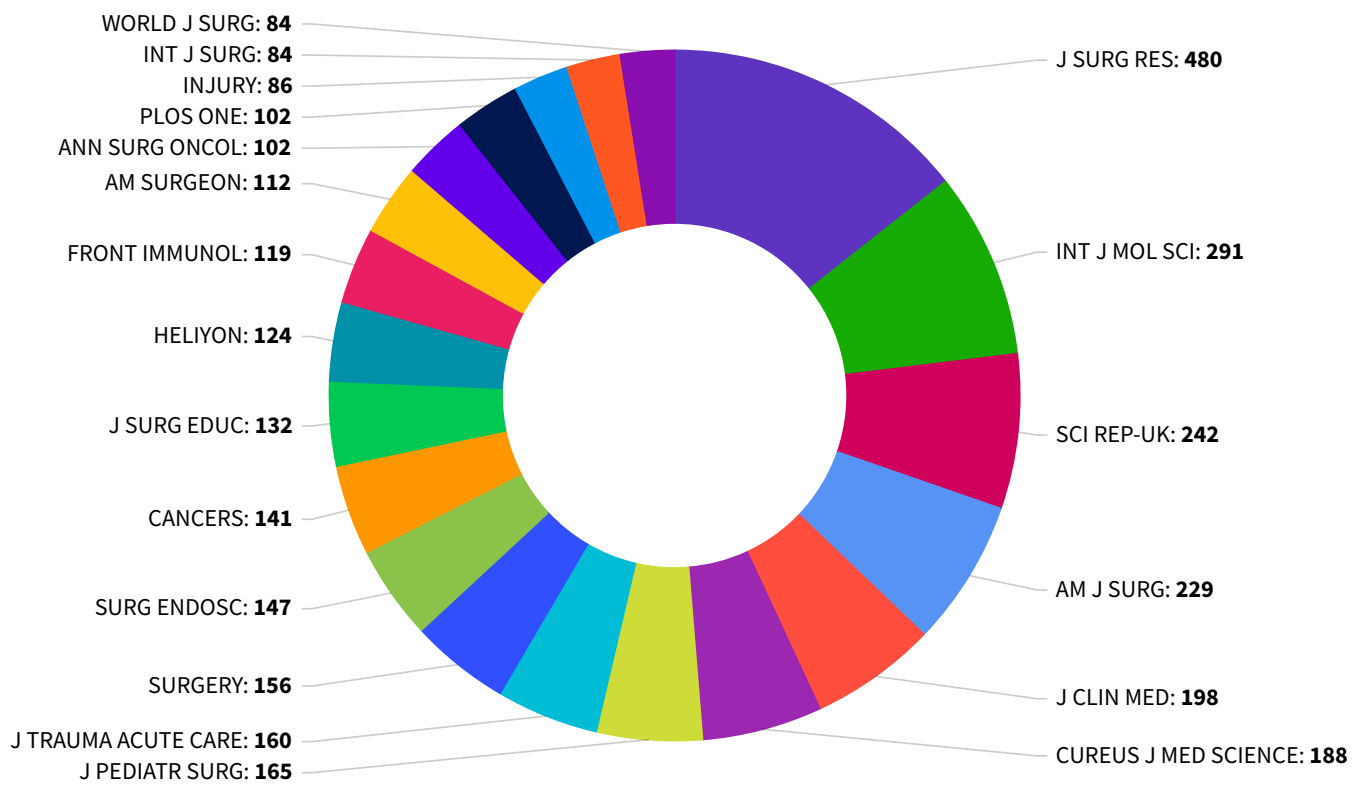


CITED YEAR	# OF CITES FROM 2024	CUMULATIVE %	# OF CITING SOURCES
All years	**16,974 citations**	**100.00%**	**3,498 sources**
2024	173 citations	1.02%	123 sources
2023	708 citations	5.19%	354 sources
2022	1,390 citations	13.38%	646 sources
2021	1,829 citations	24.15%	867 sources
2020	1,482 citations	32.89%	762 sources
2019	1,244 citations	40.21%	646 sources
2018	1,058 citations	46.45%	582 sources

Journal Citation Relationships

Cited Data | Citing Data

Top 20 journals citing J SURG RES by number of citations



Content metrics

Source data

This tile shows the breakdown of document types published by the journal. Citable Items are Articles and Reviews. For the purposes of calculating JIF, a JCR year considers the publications of that journal in the two prior years. Learn more

Average JIF Percentile

Export

The Average Journal Impact Factor Percentile takes the sum of the JIF Percentile rank for each category under consideration, then calculates the average of those values. Learn more

671 total citable items

	ARTICLES	REVIEWS	COMBINED(C)	OTHER DOCUMENT TYPES(O)	PERCENTAG
NUMBER IN JCR YEAR 2024 (A)	639	32	671	33	95%
NUMBER OF REFERENCES (B)	18,478	1,984	20,462	163	99%
RATIO (B/A)	28.9	62.0	30.5	4.9	

ALL CATEGORIES AVERAGE
52.7

SURGERY
52.7

Contributions by organizations

Export

Organizations that have contributed the most papers to the journal in the most recent three-year period. Learn more

RANK	ORGANIZATION	COUNT
1	UNIVERSITY SYSTEM OF OHIO	169
2	HARVARD UNIVERSITY	141
3	UNIVERSITY OF CALIFORNIA SYSTEM	132
4	UNIVERSITY OF TEXAS SYSTEM	90
5	PENNSYLVANIA COMMONWEALTH SYSTEM OF HIGHER EDUCATION (PCSHE)	69

Contributions by country/region

Export

Countries or Regions that have contributed the most papers to the journal in the most recent three-year period. Learn more

RANK	COUNTRY / REGION	COUNT
1	USA	1638
2	CHINA MAINLAND	96
3	CANADA	39
4	JAPAN	27
5	ENGLAND	23
6	TURKIYE	18
7	ITALY	17
8	NETHERLANDS	16
9	BRAZIL	15

Additional metrics

Eigenfactor Score

0.01656

The Eigenfactor Score is a reflection of the density of the network of citations around the journal using 5 years of cited content as cited by the Current Year. It considers both the number of citations and the source of those citations, so that highly cited sources will influence the network more than

Normalized Eigenfactor

3.71093

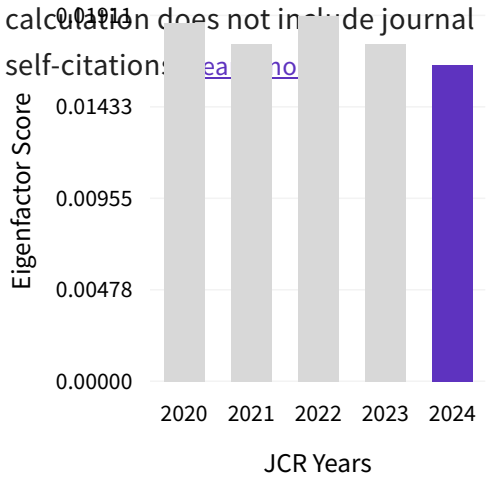
The Normalized Eigenfactor Score is the Eigenfactor score normalized, by rescaling the total number of journals in the JCR each year, so that the average journal has a score of 1. Journals can then be compared and influence measured by their score relative to 1. Learn more

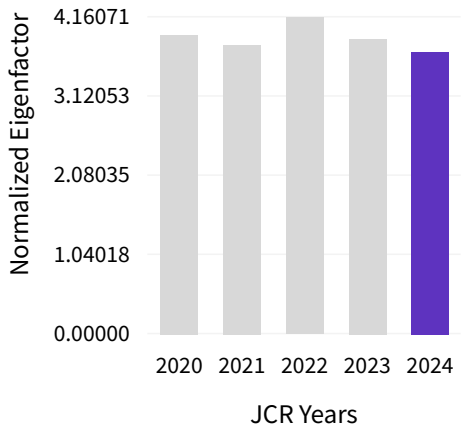
Article influence score

0.640

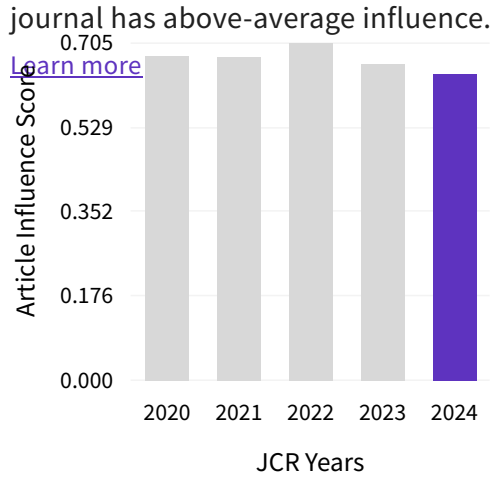
The Article Influence Score normalizes the Eigenfactor Score according to the cumulative size of the cited journal across the prior five years. The mean Article Influence Score for each article is 1.00. A score greater than 1.00

less cited sources. The Eigenfactor calculation does not include journal self-citations. Learn more





indicates that each article in the journal has above-average influence. Learn more

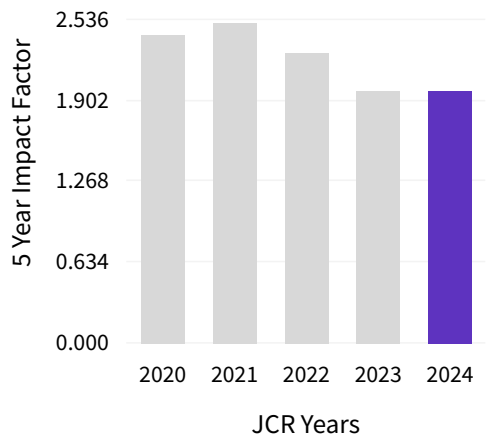


5 Year Impact Factor

2.0

View Calculation

The 5-year Impact Factor is the average number of times articles from the journal published in the past five years have been cited in the JCR year. It is calculated by dividing the number of citations in the JCR year by the total number of articles published in the five previous years. Learn more

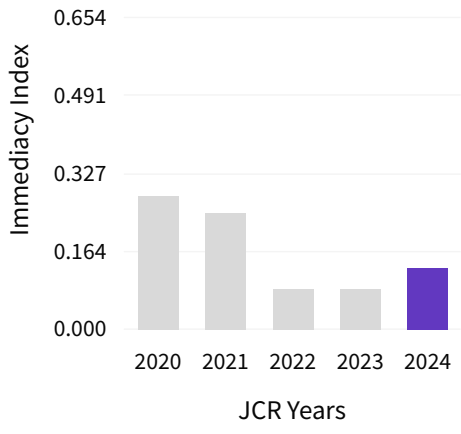


Immediacy Index

0.3

View Calculation

The Immediacy Index is the count of citations in the current year to the journal that reference content in this same year. Journals that have a consistently high Immediacy Index attract citations rapidly. Learn more



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Rare Rib-Originating Solitary Plasmacytoma: Retrospective Analysis and Surgical Outcomes

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ARTICLE INFO

Article history:
Received 22 August 2024
Received in revised form
20 December 2024
Accepted 30 December 2024
Available online 23 January 2025

Keywords:
Rib
Solitary plasmacytoma
Surgery

ABSTRACT

Introduction: Solitary plasmacytomas are tumors characterized by a local increase of malignant plasma cells in soft tissue or bone and may occur anywhere without evidence of systemic disease. The aim was to focus on the main surgical techniques and outcomes for this rare chest wall tumor.

Methods: Patients with solitary plasmacytoma involving a rib, who were operated for diagnostic or treatment purposes between 2018 and 2023 were retrospectively reviewed.

Results: Of the six patients included, three were male and the median age was 55.6 (range: 32-74) ys. All patients had preoperative positron emission tomography-computed tomography. Two underwent Tru-cut biopsy before surgery, but only one was then diagnosed. Two patients underwent surgery for diagnosis and the remainder underwent resection and reconstruction. In one patient with both rib and sternum involvement, rib and partial sternum resection was performed and the defect was repaired with mesh. During the 24.1 mos average follow-up period, two patients died, both of whom had metastasis preoperatively. The median survival of all patients was 24.1 (range: 3-63) mos.

Conclusions: Solitary plasmacytoma is rarely seen among primary malign tumors of the chest wall. A multidisciplinary approach is important in these cases. Surgical treatment in solitary plasmacytoma has fewer local and systemic side effects compared to radiotherapy and chemotherapy. Therefore, the place of surgery in the treatment of solitary plasmacytoma should be revised. Our findings show that surgery should be considered as not only a palliative treatment, but also a curative one, in solitary plasmacytomas arising in the rib.

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https://doi.org/10.1016/j.jss.2024.12.054

Introduction

Plasma cell neoplasms encompass a diverse group of disorders, including plasma cell myeloma, plasmacytoma, immunoglobulin deposition diseases, POEMS syndrome (osteoclastic myeloma), and light chain deposition diseases. Among these, solitary plasmacytoma (SP) is prominent as a rare localized primary tumor composed of malignant plasma cells, accounting for less than 5% of all malignant plasma cell tumors.[1] A population-based study conducted in the United States by the Surveillance, Epidemiology, and End Results program reported that SP constituted 6.2% of all plasma cell diseases, with an incidence rate of 0.34 per 100,000 person-years.[2]

SP can be classified into two types: solitary bone plasmacytoma, which originates in bone, and solitary extramedullary plasmacytoma, which affects soft tissue.[3] SP arises from plasma cell proliferation without bone marrow infiltration, presenting as a single mass of monoclonal plasma cells located either extramedullary or intraosseously, depending on the subtype.[4] It predominantly affects men, with a male-to-female ratio ranging from 1.2:1 to 2:1, typically manifesting in individuals aged 55-60 ys.[3] Clinically, SP often presents with localized pain and a nonpalpable mass. Patients may report pain due to bone destruction, spinal cord or nerve root compression, or soft tissue enlargement.[3] Radiologically, SP usually exhibits a lytic lesion pattern, though less commonly, a multicystic appearance may be apparent. Unlike multiple myeloma (MM), patients with SP do not typically exhibit systemic findings, such as hypercalcemia, anemia, or renal failure. However, there remains a risk of progression to MM.[4] Anatomically, SP most frequently affects the spine and skull, followed by the ribs, clavicle, and scapula. It is rarely found in the long bones of the lower extremities.[5] Rib plasmacytomas, in particular, are characterized by bone cortex destruction and expansion into surrounding soft tissues. Due to the rarity of SP originating from the rib, there is a significant lack of definitive diagnostic criteria and treatment protocols.[3] Studies concerning rib plasmacytomas are scarce, and no consensus exists on prognostic factors and treatment strategies.

In this study, the aim was to add to the existing knowledge by sharing our experience in surgically treating six patients with SP arising in the rib. Our objective was to provide additional insights into this poorly understood disease, highlighting the clinical presentation, diagnostic challenges, and treatment outcomes associated with this rare condition.

Materials and Methods

This retrospective analysis included six consecutive patients diagnosed with SP of the rib, all of whom underwent surgical intervention. Ethical approval was obtained from the institutional review board (Ethics document no: 2024/09/810), and the study was conducted in accordance with the principles of the Declaration of Helsinki.

Patient selection and exclusion criteria

Patients diagnosed with MM were excluded from the study. All participants provided informed consent and underwent comprehensive preoperative evaluations. The patient cohort included both male and female individuals, with a wide age range, thus ensuring the study captured a broad spectrum of clinical presentations.

Preoperative assessments

Before surgery, all patients consulted with a hematology-oncologist during either the perioperative or postoperative period to include a multidisciplinary and surgical or medical approach to their care. Preoperative imaging included computerized tomography (CT) scans to evaluate tumor extent and aid in surgical planning. In addition, fluorodeoxyglucose positron emission tomography-computed tomography (FDG PET-CT) was performed for all patients to investigate the presence of bone tumors, assess for potential MM, and detect any probable metastasis.

Diagnostic procedures

Fine needle aspiration biopsy (FNAB) was performed preoperatively on two patients to obtain a preliminary diagnosis. Moreover, diagnostic biopsies were conducted on two other patients to confirm the presence of SP. These procedures were central in guiding surgical planning and making an accurate diagnosis.

Surgical interventions

The surgical interventions varied depending on the location and extent of the tumor. One patient underwent a sternal and partial costal resection, followed by reconstruction using a titanium mesh to restore structural integrity. Rib resection alone was performed on one patient, while two others underwent rib resection combined with reconstruction procedures. The choice of surgical technique was tailored to each patient's specific condition, with the goal of achieving complete tumor removal while maintaining both functionality and aesthetics.

Postoperative management and follow-up

Following surgery, patients were closely monitored for postoperative complications and attended regular follow-up visits to assess recovery and detect any signs of recurrence or metastasis. The study compared patients based on age, gender, preoperative imaging modalities, diagnostic procedures, types of surgery performed, preoperative and postoperative metastatic status, and survival outcomes.

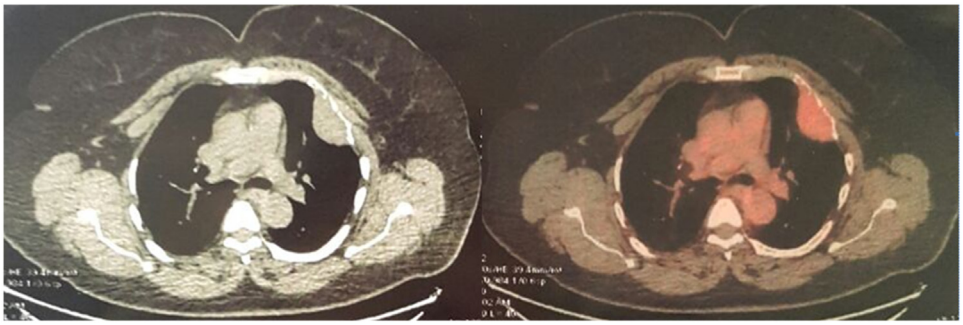


Fig. 1 – Rib destruction by solitary plasmacytoma in PET.

Data analysis

Data collected from patient records were analyzed to identify trends and outcomes associated with SP of the rib. The analysis compared the effectiveness of various surgical approaches, the role of preoperative diagnostics, and the overall prognosis of patients with this rare condition.

Results

This study involved six patients, three of whom were male, with a mean cohort age of 55.6 ys (range: 32-74 ys). Clinical presentations varied, with five patients experiencing chest pain and one reporting shortness of breath.

Diagnostic imaging revealed osteolytic lesions consistent with SP in all patients on CT scans. FDG PET-CT showed abnormal focal uptake in five of the six patients (Fig. 1). The standardized uptake values (SUVmax) for these patients ranged from 3.8 to 11, indicating variable metabolic activity.

FNAB was performed on two patients; however, neither procedure provided a definitive diagnosis. Diagnostic clarity was achieved in two patients through video-assisted thoracoscopic biopsy, although neither underwent complete surgical resection. Of these two, one presented with bone metastasis, while the other was deemed medically inoperable.

Surgical interventions included rib resection and reconstruction for two patients. In one case, the resection involved both the affected rib and a partial sternal resection, followed by mesh reconstruction (Fig. 2). The other patient underwent an isolated rib resection. Following surgery, all patients were assessed for potential MM through extensive diagnostic investigations, including protein electrophoresis, immunofixation, 24-h urine analysis, and serum free light chain assays. Bone marrow biopsies were conducted as necessary to rule out MM. None of the patients had any findings suggestive of MM.

Postsurgical follow-up protocol

After surgery, a standardized follow-up protocol was implemented for all patients. Clinical evaluations were conducted every 3 mos during the first year, every 6 mos during the second year, and annually thereafter. Imaging assessments, including chest CT scans and FDG-PET-CT, were performed at 6-mo intervals to monitor for local recurrence or metastasis. Laboratory tests, such as serum electrophoresis and urine Bence-Jones protein analysis, were conducted at each visit to detect signs of progression to MM. Bone marrow biopsies were performed annually or as clinically indicated.

The average follow-up period was 24.1 mos, ranging from 3 to 63 mos. During this time, two patients died: one had bone metastasis at diagnosis and passed away 2 ys postsurgery, while another succumbed to renal failure complicated by bilateral metastatic effusion. Four patients remain alive and under follow-up. Notably, distant metastasis was detected in one patient with initial costal involvement 2 ys postsurgery, who continues to be monitored. The remaining three patients are currently disease-free with no signs of recurrence (Table 1).

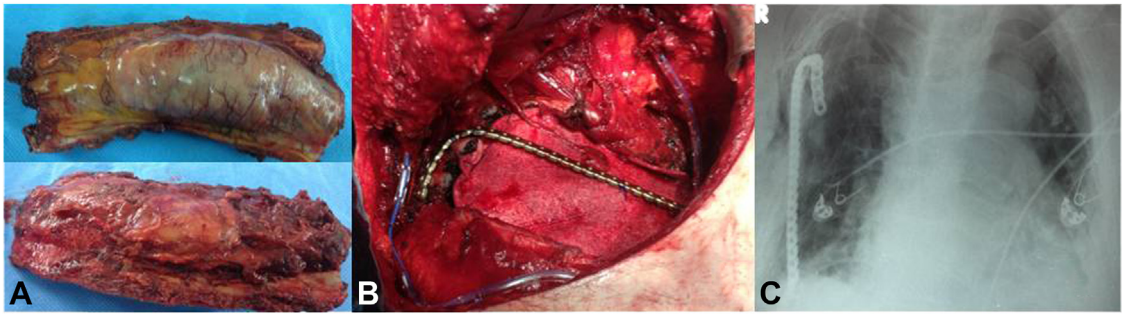


Fig. 2 – (A) Macroscopic image of the rib; (B) support of the chest wall with polytetrafluoroethylene mesh and titanium double angle; and (C) postoperative chest radiograph.

Table 1 – Demographic, clinical data of the patients.

Case	Age	Gender	Clinical features	Location	PET-CT findings	Surgical approach	Complication	Chemotherapy/ Radiotherapy	Follow-up (mo)	Metastasis	Ex/ Alive
1	60	M	Pain	Rib	SUV: 10.8	Biopsy (VATS)	No	Chemotherapy + RT	23	Bone metastasis	Ex
2	74	F	Dyspnea	Rib	SUV: 7.4	Biopsy (VATS)	No	Chemotherapy + RT	3	Pleural effusion	Ex
3	61	M	Pain	Rib	Negative	Rib resection + reconstruction	No	None	41	Negative	Alive
4	57	F	Pain	Rib	SUV: 5.2	Rib resection + reconstruction	No	None	10	Negative	Alive
5	50	M	Pain	Rib + sternum	SUV: 3.8	Sternum resection + reconstruction	No	None	6	Negative	Alive
6	32	F	Pain	Rib	SUV: 11	Rib resection	No	None	2	Negative	Alive

SUV = standardized uptake value; Ex = exitus; M = male; F = female; RT = radiotherapy; VATS = video-assisted thoracic surgery

Discussion

SP of the rib is a rare condition, primarily documented through individual case reports,[6-13] as summarized in Table 2. Historically, SPs are characterized by an indolent course, with a reported median survival time of approximately 10.7 ys.[14] Survival rates at 5, 10, and 20 ys are 75%, 52%, and 37%, respectively. In contrast, our series of six patients showed a significantly shorter mean survival time of 24.1 mos, with four patients still alive at the time of follow-up. The two patients who died already had metastases at the time of diagnosis. This discrepancy highlights the variability in outcomes depending on differences in patient demographics, disease characteristics, particularly at presentation and/or management strategies.

The median age of 55.6 ys in our cohort aligns with the literature, which indicates that SP typically presents in the sixth decade of life.[15-18] Despite the reported generally higher prevalence in males, our study observed an equal gender distribution, which may be attributed to the small sample size and underscores the need for further research in larger cohorts.

Clinically, SP often presents with chest wall pain,[15,19] which was the case for five of our six patients. The sixth patient presented with shortness of breath, illustrating the diverse clinical presentations of this condition. Notably, one patient exhibited Horner's syndrome, characterized by ptosis, miosis, and facial anhidrosis. This rare manifestation may indicate sympathetic nerve involvement and serves as a reminder of the potential complexity in diagnosing rib lesions.

Imaging plays a crucial role in diagnosing and managing SP.[19-21] In the present study, CT scans consistently identified osteolytic lesions, while PET-CT demonstrated abnormal FDG uptake in five out of six patients, with SUVmax values being very variable (range: 3.8-11). This variability in uptake may reflect differences in tumor metabolism or biological behavior. The absence of FDG uptake in one patient highlights the limitations of PET-CT in detecting all plasmacytomas, suggesting that supplementary diagnostic methods may sometimes be necessary.

Histopathological confirmation is essential for diagnosis. While FNAB is commonly used, its diagnostic yield can vary. Agarwal *et al.* reported a sensitivity of 86% and specificity of 95% for FNAB in bone tumors.[16] However, in our series, FNAB failed to provide a diagnosis in two patients, highlighting the limitations of this approach and the need for alternative or additional diagnostic modalities.

Operability criteria for SP include histopathological findings consistent with SP, a negative bone marrow biopsy, and the absence of additional lesions on imaging.[16,19-21] In the present study, diagnostic video-assisted thoracoscopic biopsy was performed in patients with suspected bone metastasis or bilateral effusion, ensuring accurate diagnosis and facilitating treatment planning.

Radiation therapy remains the standard treatment for SP, offering effective local control with reported success rates ranging from 87% to 96%.[14] Surgical excision, typically reserved for well-circumscribed lesions that can be completely resected or to prevent pathological fractures, was performed in two of our patients. One patient underwent rib resection and reconstruction, while another had partial rib

Table 2 – Overview of the literature from the last 5 ys on surgical removal of rib plasmacytoma.

First author (year)	Age	Gender	Clinical features	Location	Preoperative diagnosis	PET-CT findings	Surgical approach	Complication	Chemotherapy/RT/S	Follow-up (mo)	Metastasis	Ex/ Alive
Singh (2020)[6]	39	M	Painful swelling	Rib	Tru-cut biopsy Plasmacytoma	SUV: 14.5	(–)	NM	NM	NM	No	NM
Afra (2020)[7]	50	M	Painless lump	Rib	CT-guided biopsy solitary Plasmacytoma	Not performed	(–)	NM	NM	NM	Pleural effusion	NM
Choi (2021)[8]	63	M	Pain	Sternum	Plasmacytoma	Not performed	Sternum resection + reconstruction	No	S + RT	NM	No	NM
Tang (2021)[9]	56	M	Pain	Rib	Plasmacytoma	SUV: 4.3	Rib resection + reconstruction	No	S	NM	Bone metastasis	NM
Kalimuthu (2021)[10]	43	M	Numbness	Rib	CT-guided biopsy solitary Plasmacytoma	SUV: 20.9	(–)	No	Chemotherapy	NM	No	Alive
Yao (2022)[11]	77	M	Pain	Rib	Plasmacytoma	Not performed	Rib resection + reconstruction	No	S + chemotherapy + RT	14	No	Ex
Laasri (2023)[12]	48	M	Painless lump	Rib	CT-guided biopsy solitary Plasmacytoma	Not performed	(–)	No	RT	12	No	Alive
Kaya (2024)[13]	56	M	Painless lump	Rib	CT-guided biopsy solitary Plasmacytoma	FDG-avid costa (SUV: NM)	NM	NM	NM	NM	No	Alive

Ex = Exitus; M = male; SUV = standardized uptake value; FDG = fluorodeoxyglucose uptake; NM = not mentioned; CT = computed tomography; S = surgery; RT = radiotherapy.

resection with mass excision followed by mesh reconstruction. These interventions reflect current treatment practices while emphasizing the need for individualized approaches based on lesion characteristics and patient health.

The long-term prognosis of SP is heavily influenced by the risk of progression to MM. Bataille *et al.* conducted a 10-y follow-up of 114 SP cases and reported that 85% of patients experienced relapse, with 58% developing MM, 12% experiencing local relapse, and 15% having solitary lesions.[16] In our study, one patient developed distant bone metastasis 2 ys after rib resection, underscoring the importance of vigilant long-term monitoring. Although no metastasis was observed in the remaining patients, the relatively short follow-up period requires cautious interpretation, as the risk of late relapse or progression to MM remains significant.

This study has several limitations that should be considered. First, the small sample size of only six patients limits the generalizability of the findings. In addition, the retrospective design introduces potential biases, as data collection relied on available records, which may not have captured all relevant variables. The relatively short follow-up period of 24.1 mos also poses a limitation in assessing long-term outcomes, such as late recurrences or progression to MM. Longer follow-up is needed to gain a clearer understanding of the true prognosis of SP arising in the rib. Future research with larger, prospective cohorts and extended follow-up periods will be important in addressing these limitations and refining optimal management strategies for this rare condition.

Conclusions

SP of the rib is a rare tumor that requires a multidisciplinary approach for optimal management due to its high relapse rate and potential complications. Accurate diagnosis, which involves distinguishing SP from MM and other conditions, relies on comprehensive imaging, biopsy, and laboratory testing. Surgical intervention plays a key role in treating well-circumscribed lesions, offering benefits such as reduced local and systemic side effects compared to radiation therapy and chemotherapy. While surgery has traditionally been considered palliative, evidence suggests it may provide curative benefits, particularly when complete resection is achievable.

Post-treatment surveillance is essential for detecting early recurrence or progression, as SP carries a significant risk of transitioning to MM or developing distant metastases. A thorough multidisciplinary approach, including re-evaluating the role of surgery and maintaining diligent long-term follow-up, will be important for improving patient outcomes and quality of life in this complex and rare condition. By sharing our experience with these six patients, we hope to contribute valuable additional data to the limited knowledge of SP arising in the rib and help inform the development of more effective diagnostic and treatment protocols for future cases.

Supplementary Materials

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jss.2024.12.054.

Disclosure

The authors declare that they have no competing interests.

Funding

None.

Availability of Data

All data generated or analyzed during this study are included in this published article.

Ethical Approval

All procedures performed in the study were conducted in accordance with the guidelines outlined in the Helsinki Declaration and its amendments. The study protocol was approved by the Ethical Committee of Kartal Kosuyolu High Specialization Education & Research Hospital (No: 2024/09/810).

CRediT authorship contribution statement

Sevinc Citak: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Serkan Bayram:** Visualization, Resources, Data curation. **Busra Yaprak Bayrak:** Writing – review & editing, Visualization, Validation, Supervision, Methodology, Investigation, Formal analysis. **Mustafa Vayvada:** Writing – review & editing, Writing – original draft, Supervision, Software, Resources, Conceptualization. **Cagatay Tezel:** Visualization, Supervision, Resources, Formal analysis, Data curation.

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