The Top Twenty-Five Most Influential Articles in Surgery for Colorectal Cancer

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INTRODUCTION

There is no established academic resource for surgical trainees to reference the most influential articles that guide operative decision making for the contemporary surgical management of colorectal cancer.

While the digital age has enabled peer reviewed articles to be readily accessible, it can be challenging for the trainee to ascertain the core building blocks for their knowledge base and what is most salient amongst the vast data.

Here we analyze the top 25 landmark articles in the surgical management of colorectal cancer in the last 26 years to help guide training programs and the surgical trainee.

METHODS

A Web of Science Citation Index search was queried in January 2024 in accordance with previously published protocol. The search engine time frame was 26 years. The terms "Colon Cancer" and "Rectal Cancer" were reviewed. Results were restricted to peer-reviewed original articles written in the English language.

A subsequent list of the top 25 most cited publications in the surgical management of colorectal cancer were obtained. A citation density score was calculated for each article, and arranged from highest to lowest.

The H-index for each primary author was identified via the Web of Science Database and recorded as the primary H-index value, then cross referenced with an H-index found on Google Scholar or Research Gate and recorded as the secondary H-index value. Duplicate authors were counted once in statistical calculations. A two-tailed, unpaired t-test was utilized to determine if a significant value existed between the two sources of the H-index values.

TABLE 1: Top 25 Landmark Papers

Rank	Publication Information	Total Citations	Density Score
1	Standardized surgery for colonic cancer: complete mesocolic excision and central ligation - technical notes and outcome **Authors:** Hohenberger, W; Weber, K; Matzel, K; Papadopoulos, T; Merkel, S **Source:** COLORECTAL DISEASE **Published:** May, 2009 **PMID:** 19016817	970	49
2	Operative versus nonoperative treatment for stage 0 distal rectal cancer following chemoradiation therapy - Long-term results **Authors:** Habr-Gama, A; Perez, RO; Nadalin, W; Sabbaga, J; Ribeiro, U; Sousa, AHSE; Campos, FG; Kiss, DR; Gama-Rodrigues, J **Source:** ANNALS OF SURGERY **Published:** October, 2004 **PMID:** 15383798	1124	40
3	Five-year follow-up of the Medical Research Council CLASICC trial of laparoscopically assisted versus open surgery for colorectal cancer **Authors:** Jayne, DG; Thorpe, HC; Copeland, J; Quirke, P; Brown, JM; Guillou, PJ **Source:** BRITISH JOURNAL OF SURGERY **Published:** November, 2010 **PMID:** 20629110	693	37
4	Long-term results of a randomized trial comparing preoperative short-course radiotherapy with preoperative conventionally fractionated chemoradiation for rectal cancer **Authors:** Bujko, K; Nowacki, MP; Nasierowska-Guttmejer, A; Michalski, W; Bebenek, M; Kryj, M **Source:** BRITISH JOURNAL OF SURGERY **Published:** October, 2006 **PMID:** 16983741	841	35
5	Long-term follow-up of the Medical Research Council CLASICC trial of conventional versus laparoscopically assisted resection in colorectal cancer **Authors:** Green, BL; Marshall, HC; Collinson, F; Quirke, P; Guillou, P; Jayne, DG; Brown, JM **Source:** BRITISH JOURNAL OF SURGERY **Published:** January, 2013 **PMID:** 23132548	444	32

TABLE 2: Author H-Indices

Rank	PMID	H-index (1°)	H-index (2°)
1	19016817	40	11
2	15383798	37	63
3	20629110	84	59
4	16983741	25	34
5	23132548	17	*

*n/a denotes unavailability of H-index from identified source

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RESULTS

- The search rendered > 25,000 articles. The top 25 landmark articles are analyzed and summarized in *Table 1*.
- These most influential papers yielded 13,403 cumulative citations with a range of 305-1,124 citations per article; the mean Citation Density score was 17.6.
- *Annals of Surgery* published the majority of the articles (36%), followed by *British Journal of Surgery* (20%) and *Diseases of the Colon and Rectum* (16%).
- The primary H-index value range, mean, and median values were found to be 7.0-84, 31.8, and 29.0, respectively, and are listed in *Table 2*.
- The secondary H-index value range, mean, and median values were found to be 4.0-108, 48.6, and 45.0, respectively.
- Two-tailed, unpaired student's t-test determined a significant difference between the primary and secondary H-indices (p=0.0376, 95% CI 15.78 [1.02-32.58])

CONCLUSIONS

This scholarly review provides a collection of the top 25 most cited original publications in the surgical management of colorectal cancer within the last 26 years. Here we provide an educational guide for surgical trainees to build an understanding of the relevant literature pertaining to this subject.

DISCLOSURES

The authors have nothing to disclose.