

# This Week's Citation Classic

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**Spratt J S, Jr., Ackerman L V & Moyer C A.** Relationship of polyps of the colon to colonic cancer. *Ann. Surg.* 148:682-98, 1958.  
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This paper challenged the dogma that all colonic cancers evolved from preexisting benign polyps and initiated a sustained period of restudy of many issues related to the control of colon cancer in man. [The SC<sup>®</sup> indicates that this paper has been cited in over 185 publications since 1961.]

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"On my return to Barnes Hospital as a first-year assistant resident in 1955, after being away for two years of post-internship Naval duty, one of my first rotations was in surgical pathology under L.V. Ackerman. As was Ackerman's custom, he gave almost everyone on his service a project. He said, 'Spratt, you go look up polyps.' What he did not know was that my premedical interests had been in mathematics and that I suffered from the unfulfilled ambition to obtain a PhD in mathematics. Southwestern Medical School, near my home and affordable, interposed. At the time I went to 'look up polyps,' I was more of a mathematician than a surgeon, unbeknown to Ackerman. To me the anatomical distributions, sizes, and pathological classifications became mathematical distributions, frequencies, and rates that could be studied and compared. I found, with Carl Moyer's encouragement, many incongruities in the dogma that colon polyps were pre-malignant lesions or that any public health advantage was being obtained by trying to keep colons free of the ubiquitous benign adenomatous polyp.

In fact, the operative mortality rate attending transabdominal colonic polypectomy was found to exceed the age-specific ratio of cancers to polyps. To this day, there is no controlled clinical trial confirming that any particular strategy of benign polyp removal reduces the mortality from colon cancer or adds to human longevity.

"This first paper of mine was presented by Moyer, my now deceased surgical mentor, at the annual meeting of the American Surgical Association and attracted immediate and broad attention because of the documented deviation from past thinking and the economic significance of the study in deflating the justification of high-cost programs for the mass removal of benign polyps. This paper also questioned the credibility with which morphological pathology can be used to predict the rate or frequency of evolution from benign to malignant states.

"Subsequent studies rapidly strengthened these conclusions by defining the properties of small primary cancers,<sup>1</sup> showing that the propensity of colon cancers to metastasize to lymph nodes was independent of the size of the primary cancers,<sup>2</sup> showing the enormous differences in growth rates that exist between cancers and benign polyps,<sup>3</sup> and showing that the same carcinogen could induce both cancers and benign polyps but that the cancers began as cancers and did not go through the polypoid metamorphosis.<sup>4</sup>

"These studies have all stimulated intense arborizations of investigations by many students of colonic cancer. Colonic cancer is still a major health problem that may yet be, one day, a preventable disease."<sup>5</sup>

1. Spratt J S, Jr. & Ackerman L V. Small primary adenocarcinomas of the colon and rectum. *J. Amer. Med. Assn.* 179:337-46, 1962.
2. ----- Relationship of the size of colonic tumors to their cellular composition and biological behavior. *Surg. Forum* 10:56-61, 1960.
3. Wellin S, Youker J & Spratt J S, Jr. The rates and patterns of growth of 375 tumors of the large intestine and rectum observed serially by double contrast enema study (Malmö technique). *Amer. J. Roentgenol.* 90:673-87, 1963.
4. Spjut H J & Spratt J S, Jr. Endemic and morphologic similarities existing between spontaneous colonic neoplasms in man and 3,2'-dimethyl-4-aminobiphenyl induced colonic neoplasms in rats. *Ann. Surg.* 161:309-24, 1965.
5. Spratt J S, Jr. & Greenberg R. Epidemiology and etiology of cancers of the colon, rectum and anus. *Neoplasms of the large intestine, rectum and anus.* Philadelphia: Saunders. In press, 1983.