Over the last 250 years, the surgical and medical treatment of rectal cancer has changed dramatically. At one point rectal cancer was considered an incurable disease, but now multidisciplinary therapies have improved mortality rates from 100% to less than 4% for locally advanced rectal cancer. This multimodal approach obviously benefitted from advances in anesthesia, asepsis, and blood transfusions. Even further improvements have been made with better understanding of the anatomy and pathology of rectal cancer culminating in improved surgical techniques such as abdominoperineal resection (APR) and total mesorectal excision (TME). Plus, advances in chemotherapy and radiation have allowed for more sphincter-preserving procedures than ever, sometimes even avoiding surgery altogether with complete responses [1]. Newer technologies, with robotic and laparoscopic instruments, are reducing post-operative pain and hospital stays. Still, we can do better.

In the United States, most rectal cancer surgery is performed by non-specialized surgeons in low-volume centers averaging less than ten procedures per year. This leads to varying rates of permanent colostomies as well as suboptimal oncologic outcomes. Mortality rates in low volume centers are also doubled compared to high-volume, colorectal-trained surgeons. The high volume specialized surgeons have lower operative mortality, lower permanent stoma rates, and improved overall 5-year survival rates [2].

Several countries in Europe (i.e., Great Britain, Norway, Sweden, and Denmark) have developed centers of excellence with standardization among radiologists, pathologists, oncologists and surgeons. They have consistently and repeatedly shown decreased local recurrence and increased five-year survival rates. High volume centers with standardized processes and techniques with specialty-trained surgeons and physicians are improving rectal cancer outcomes. Yet, the United States still lags behind [2].

The times are changing, though. In 2011, several leading colorectal surgeons and physicians created a consortium for optimizing the surgical treatment of rectal cancer (OSTRiCh). The aim of this group is to improve the standard of rectal cancer care and surgery in the United States through advocacy, education and research. [2,3] Realizing the variability of care and standards throughout the United States, the consortium recognized the need to establish uniformity of rectal cancer standards. The targeted standards include five core principles of rectal cancer treatment: TME; surgical quality measurement via pathologic assessment; specialist imaging to identify patients at high risk of local recurrence; use of neoadjuvant and adjuvant chemoradiation therapies; individualized patient treatment with a multidisciplinary team approach [3].

The Rectal Cancer Coordinating Committee (RCCC) of the American Society of Colon and Rectal Surgeons (ASCRS) was established to define knowledge and activities in the United States regarding rectal cancer initiatives. The group is working with OSTRiCh to develop standardization for rectal cancer treatment at centers of excellence. The RCCC will assess performance and rectal cancer skills through quality indicators such as preoperative imaging and postoperative pathology-based staging [4]. Another goal of the RCCC, under the fundamentals of rectal cancer surgery committee, is developing a surgical skills verification module for rectal cancer surgery, specifically TME. Meanwhile, both the College of American Pathologists (CAP) and the American College of Radiology (ACR) are creating their own verification models for participating pathologists and radiologists [2].

In 2014, OSTRiCh partnered with the American College of Surgeons (ACS) Committee on Cancer (CoC), which promotes comprehensive, high quality, and multidisciplinary patient care centers. Together they created the National Accreditation Program for Rectal Cancer (NAPRC) to establish centers of excellence focused on evidence-based processes of rectal cancer care and the multidisciplinary team approach seen in Europe. Adhering to guidelines and oversight, these centers will encompass all aspects of rectal cancer treatment, including pre-, post- and peri-operative care involving pathologists, radiologists, oncologists and surgeons. Standardization among the centers with individualized patient treatment planning, timelines for treatment, survivorship care plans, and annual performance reviews will help achieve the goal of optimizing rectal cancer care in the United States [2,3]. NAPRC first began with six pilot sites and has since been opened to all CoC-accredited hospitals.

The recent publication of the ASCRS rectal cancer surgery checklist is another step to standardization of quality. The 25-item checklist helps to eliminate omission of crucial, but commonly missed, steps [5]. The checklist also helps the various constituencies involved in patient care to coordinate. The ASCRS checklist was developed to provide safety and quality to rectal cancer patients undergoing surgery, to incorporate best practices into patient treatment, and to raise general awareness of all steps included within the checklist. The checklist is also meant to serve as a foundation for building centers of excellence for rectal cancer surgery. The checklist is more than a pre-op tool, but ensures that all the steps and specialties leading up to surgery are involved. It encompasses the total care of the rectal cancer patient. The checklist promotes discipline and encourages higher performance in treating patients with rectal cancer [6]. It is another tool to help move forward in standardizing care for this complex, multidisciplinary disease. I see its greatest benefit in low-volume centers not accredited by the CoC, though low-volume
centers may not be accredited, the surgeons and associated staff can still perform the same steps and procedures to ensure quality care.

It is an exciting time in the fight against rectal cancer in the United States. Standardization of care, which includes centers of excellence, skill labs, the NAPRC, and surgical checklists, will enhance and improve the treatment of rectal cancer. We have seen the benefits of these actions in Europe and I welcome this centralization of care here.

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