https://doi.org/10.63838/001c.172431 ISSN 2819-2842

# Mandatory synoptic reporting for colorectal cancer improves pathology reports: An 8-year experience at a Canadian centre

**Authors:**

Cassidy MacCormack[1,*] BSc, MD; Erica Schollenberg[2] MD, MAS, LLM, FRCPC; Ashley E. Stueck[2] MD, FRCPC.

**Affiliations:**

[1]Faculty of Medicine, Dalhousie University, Halifax, NS, Canada.
[2]Department of Pathology, Dalhousie University, Halifax, NS, Canada.
[*]Author for correspondence (cassidy.maccormack@dal.ca).

The authors declare that there are no undisclosed conflicts of interest regarding the publication of this paper. All authors have provided Clockwork Communications Inc. with non-exclusive rights to publish and otherwise deal with or make use of this article, and any photographs/images contained in it, in Canada and all other countries of the world.

**Keywords:**

Colorectal cancer, quality assurance, surgical pathology, synoptic reporting.

**ABSTRACT**

**Background:** Standardized synoptic reporting has become widely adopted for cancer pathology reporting to ensure inclusion of all important pathologic data, which in turn helps guide treatment decisions and inform prognosis. In 2015, mandatory synoptic reporting for colorectal (CRC) resections was implemented in Nova Scotia's largest pathology laboratory. This study evaluated the impact of that implementation on report completeness, adherence to individual reporting elements, adequacy of lymph node staging, and differences between subspecialist gastrointestinal (GI) and non-subspecialist pathologists.

**Methods:** CRC pathology reports from the Nova Scotia Health Central Zone were reviewed for three time periods in relation to synoptic reporting implementation: before (2013 - 2015), a transition period (2015 - 2017), and after (2018 - 2020). We extracted basic demographic information, adherence to each element of the synoptic template, information about lymph node assessment, and whether the report was completed by a subspecialist GI or non-subspecialist pathologist.

**Results:** 1568 CRC resection reports were analyzed. Overall completeness improved from 79.2% before mandatory synoptic reporting to >86% after implementation. Several previously underreported mandatory elements, including macroscopic tumour perforation, perineural invasion, and overall margin status, showed improvement, as did two mandatory elements for rectal cancers (tumour location relative to peritoneal reflection and macroscopic mesorectal intactness). The proportion of cases with inadequate lymph node examination (<12 nodes) decreased significantly over time (11.2% to 5.1%). Overall report completeness did not differ significantly between GI and non-GI pathologists, though GI pathologists were more likely to pursue additional lymph node searches when initial yields were low.

**Conclusions:** Mandatory synoptic reporting has significantly enhanced the quality and completeness of CRC pathology reports in our centre, as well as adherence to key quality indicators like adequate lymph node sampling. Synoptic reporting represents an effective and durable quality improvement intervention in surgical pathology practice.