AUDIT TEMPLATE

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TITLE: Colonic and Extracolonic Findings of Computed Tomographic Colonography in a Non-Screening Canadian Population at an Academic Centre

AIM OF STUDY: At our institution, the most common cohort of individuals having CT colonography (CTC) are those that require primary screening for colorectal cancer and are unable to tolerate, or have failed, optical colonoscopy (OC). This study aims to evaluate our institution's CTC performance in detecting colonic lesions and to assess the clinical and financial impact of extracolonic findings in a non-screening Canadian population.

METHODOLOGY:

- **STEP 1.** Retrieval of all CTC study reports completed from June 2012 to July 2013 at the University of British Columbia Hospital. This was accomplished by searching for "CT + colonography" within the appropriate time frame on our institution's radiology information system (RIS), which is integrated with our picture and archiving communications systems (PACS).
- **STEP 2.** Each CTC report was reviewed and pertinent data was recorded:
    - **Patient demographics:** age, gender, indication for CTC
    - **Overall study results:** C-RAD and E-RAD grading (assigned by the reviewer if not explicitly stated), quality (good, suboptimal, poor), complications (e.g. uncomplicated, patient discomfort, bowel perforation, etc.)
    - **Colonic findings:** polyps (location, morphology, size), other colonic abnormalities (e.g. diverticulosis, wall thickening, strictures, etc.)
    - **Extracolonic findings:** categorized into abnormalities involving the small intestine, lungs, heart, vasculature, liver, gallbladder/biliary, kidneys, adrenals, spleen, pancreas, stomach, appendix, breast, ovaries, adnexa, uterus, bladder, prostate, testes, musculoskeletal and lymphatic systems.
- **STEP 3.** The electronic health record of patients with potentially important colonic findings (C-RADS C2, C3, C4, C0) were reviewed for follow-up OC, surgery, and/or pathology reports. The size, location, and histology of any polyps/masses were recorded. The per-patient and per-polyp positive predictive value of CTC was subsequently calculated with OC/surgery as the gold standard.
- **STEP 4.** The electronic health record of patients with potentially important extracolonic findings (E-RADS E3, E4) were reviewed for follow-up imaging of abnormalities detected on CTC. The additional cost of CTC from follow-up extracolonic imaging was subsequently estimated based upon the provincial medical services payment schedule.