

A Case of Colonic Perforation after CT Colonography



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Introduction

CT colonography has been increasingly utilized in patients with failed initial colonoscopy. Although it is considered a relatively safe procedure, it can rarely have serious complications with significant morbidity and mortality. We present a case of a patient with failed colonoscopy due to severe diverticular disease who was referred for a CT colonography.

Case Description

A 70-year-old male with medical history of hypertension, dyslipidemia and recurrent diverticulitis underwent diagnostic colonoscopy after a recent episode of diverticulitis 3 months ago. The patient's last colonoscopy 5 years ago showed extensive diverticular disease and one benign colonic polyp. Colonoscopy was attempted however despite using pediatric colonoscope we were not able to pass the sigmoid colon because of severe angulation and luminal narrowing. After discussion with the patient, the decision was made to refer for CT colonography, which was performed 2 months later and showed severe sigmoid diverticulosis. Note that the colon was insufflated with carbon dioxide gas. The day after the procedure, patient presented to an outside hospital with worsening abdominal pain and was found to have sigmoid perforation and air under diaphragm (Images 1&2). He was taken to the OR urgently and underwent sigmoid resection with creation of colostomy with reversal later. Pathology was negative for malignancy but showed diverticulosis, diverticulitis and serosal adhesions.

Images

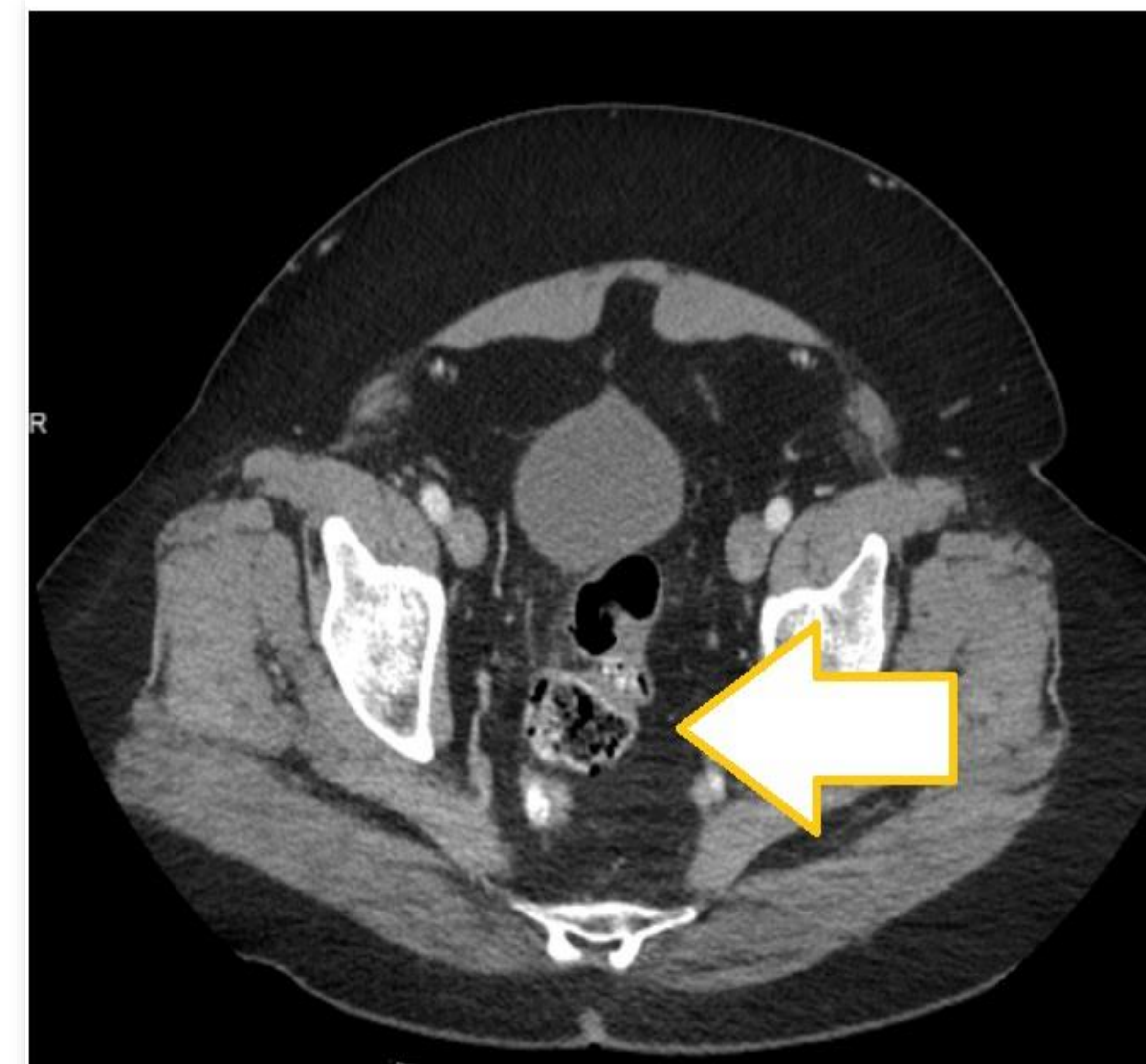


Image 1: Sigmoid Colon perforation

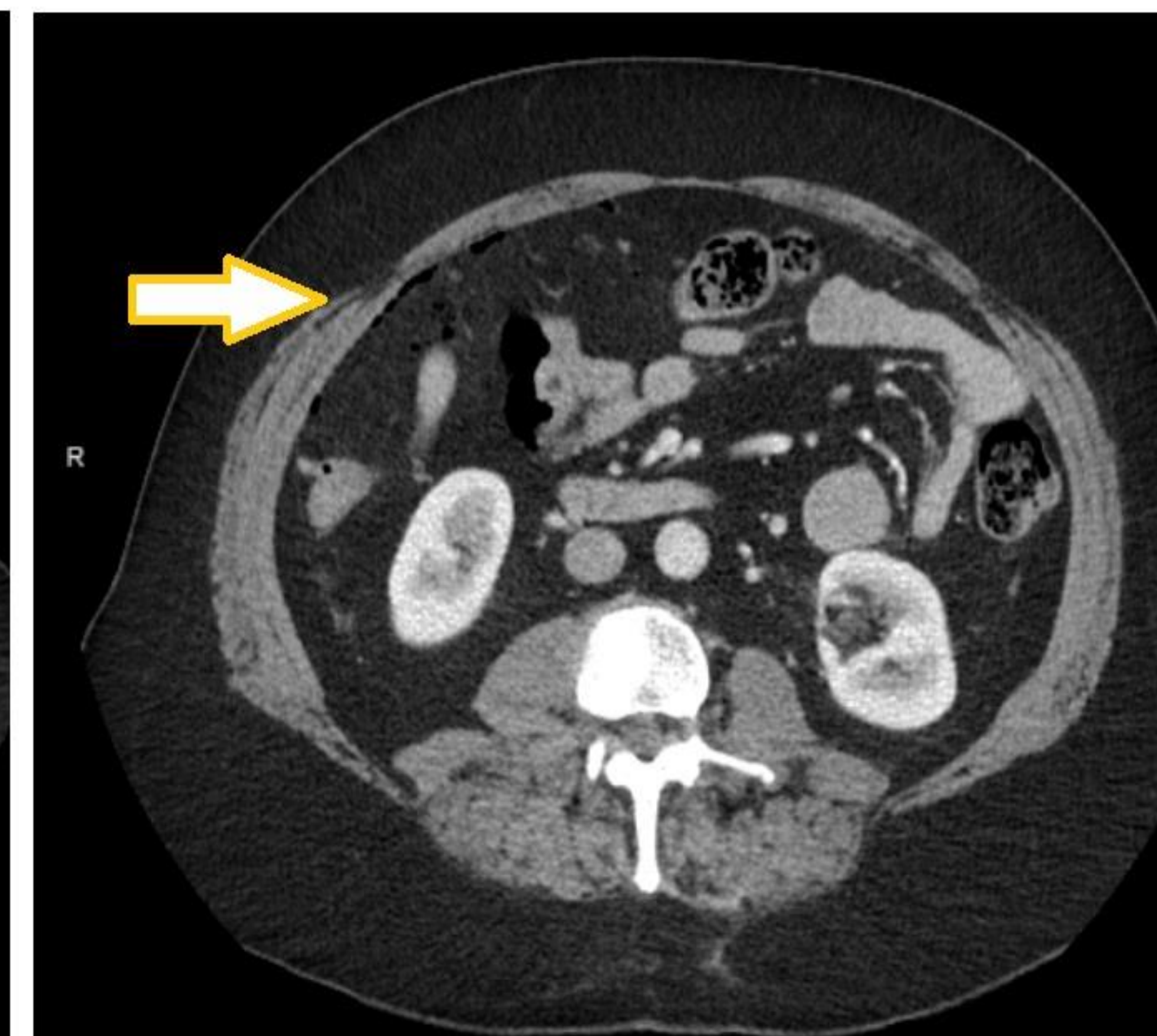


Image 2: Free air under diaphragm

References

1. David Burling et al. Potentially serious adverse events at CT colonography in symptomatic patients: national survey of the United Kingdom
2. Amy Berrington de Gonzalez et al. CT colonography: perforation rates and potential radiation risks

Discussion

- CRC is the third most common cause of cancer and second leading cause of death from cancer.
- There is a range of screening tests available for CRC screening including stool tests, colonoscopy and radiological test including CT colonography.
- Although CT colonography is a relatively benign procedure, it can occasionally cause serious complications.
- A retrospective analysis by Burling et. al found a 0.08% incidence of colonic perforation after analysis of 17067 colonography examinations. Symptomatic perforation rate was 0.03% (1).
- The data on colonic perforation after CTC is low (0.005%-0.03%) compared to colonoscopy (0.06%-0.19%) (2).
- Although CTC is a safe procedure, we suggest a detailed risks benefits discussion be held between the patient and physician that prior to referral for this procedure.