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Colonoscopy Quality Measures

“Before you choose an endoscopist for your colonoscopy, ask about his or her adenoma detection rate. It should be at least 20 percent”.

http://fightcolorectalcancer.org/research_news/2010/05/adenoma_detection_rate_measures_colonoscopy_quality

Adenoma detection rate (ADR) is a measure of the quality of colonoscopic examination, derived from dividing the number of precancerous polyps (adenomas) removed during a given time period (numerator), by the total number of colonoscopies performed during that same time period (denominator). In an article published in the New England Journal of Medicine in 2010 (<http://www.nejm.org/doi/full/10.1056/NEJMoa0907667>), researchers found that patients who had their colonoscopies performed by a physician whose ADR was less than 20% (finding and removing less than 20 precancerous polyps out of every 100 colonoscopies performed) were **10 times more likely** to develop colon cancer at some point in the future as compared to patients who had their colonoscopies performed by a physician whose ADR was higher than 20% .

Dr. Balaa has had his detection rate calculated and published. Between August 2009 and March 2011, he performed 1422 colonoscopies, and removed a total of 1100 polyps, 563 of which were of the precancerous type, for a detection rate of **51.2** polyps per hundred patients. Since April 2011 he has been routinely spraying the lining of the colon with a dye to improve the visualization of flat polyps. In the period between April 2011 and December 2012, Dr. Balaa performed 1315 colonoscopies using dye and removed 1548 polyps, 716 of which were precancerous, for a detection rate of **54.4** polyps per hundred patients.

What impacts the ADR:

There are at least 4 factors that can impact the ADR, and these include:

1. Withdrawal Time: The careful examination of the colon walls for polyps and tumors is done as the scope is being withdrawn from the patient. As such, it is imperative to document in the report the length of time it took to withdraw the scope. The shorter the withdrawal time, the less careful the examination is likely to have been, and the higher the chance of missing polyps. Current data indicates that the withdrawal time should be greater than 6 minutes if no polyps have been removed and longer if polyps were taken out.

(<http://www.acg.gi.org/patients/ccrk/QualityinColonoscopyFAQ.pdf>). In his published data, Dr. Balaa's **withdrawal time averaged 13.2 min.**

2. “Retroflexion in the right colon improves the detection of flat polyps.

(<http://www.giejournal.org/article/PIIS0016510711015410/abstract?rss=yes>).

The right side of the colon (also known as the ascending colon) is more likely to harbor flat polyps, and are likely to be missed if only forward examination is utilized. The detection rate of flat polyps in the right colon can be increased by 16 % if a maneuver called retroflexion is performed in that part of the colon. Retroflexion signifies turning the tip of the scope 180

degrees along its axis () allowing for the detection of flat polyps on the back side of the colon folds which can be missed if only forward visualization were employed. This is an extra step in the colonoscopy procedure which takes a little more time to complete. Dr. Balaa has adopted this technique and has been using it routinely since early 2011.

3. Chromendoscopy: Also known as chromoscopy or chromoendoscopy, involves the spraying the colon wall with a dye during the colonoscopy to enhance the visualization of flat polyps (<http://cancerprevres.aacrjournals.org/content/1/7/507.full>). Since April 2011, Dr. Balaa has been using dye spraying of the colon wall in all his colonoscopies, resulting in a significant increase in the detection rate of polyps from **51.2 polyps per 100 patients to 54.4**.

4. Quality of the colonic prep: A poorly cleansed colon will hinder adequate visualization and lessen the ability to detect colon polyps, particularly the flat kind. As such, it is important to follow all the instructions for the cleansing process. Dr. Balaa has modified the process of colon cleansing in such a way as to make it easier for patients to tolerate the cleansing solution, and to achieve a good to excellent cleansing in the majority of patients.