

# Building an Effective Surveillance Program for Colorectal Cancer Patients: An Integrated Review of Literature

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## Background

The contemporary US health care system values safe, high value patient centered care. National statistics demonstrate that the five-year survival rate for colorectal cancer drops from 92% (stage I) to 11% when the disease has spread to distant organs (stage IV). The development of an effective surveillance system holds a key for optimal disease outcome in this population.

## Purpose

The purpose of this review is to explore key elements for developing an effective surveillance program for colorectal cancer.

## Data sources

CINHAL, Embase, Pubmed and Cochrane were reviewed with pre-set key terms, inclusion and exclusion criteria. Hand-searching was performed to identify additional related literature.

## Study Selection (Figure 1)

English, full text journals and online sources were selected with no limitation for year term. Articles that are not colorectal cancer specific but still discuss elements of effective surveillance were retained for review.

## Data Extraction (Figure 2)

164 articles were initially selected. After reviewing the articles with selection criteria, 31 articles were retained.

## Data Synthesis (Figure 3 & 4)

The Johns Hopkins Strength and Quality of Research Evidence Rating Scheme was used for quality and strength rating. The selected articles were summarized using the Johns Hopkins Nursing Evidence Based Practice Individual Evidence Summary Tool for analysis.

Figure 1: Inclusion and Exclusion Criteria

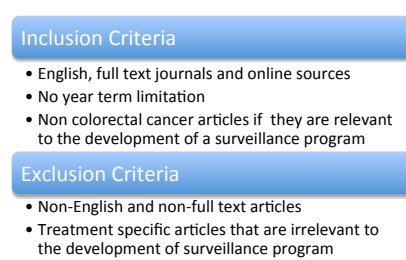


Figure 2: Study Selection

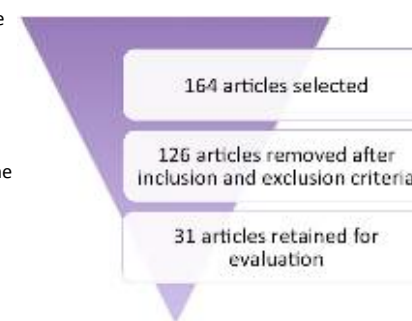
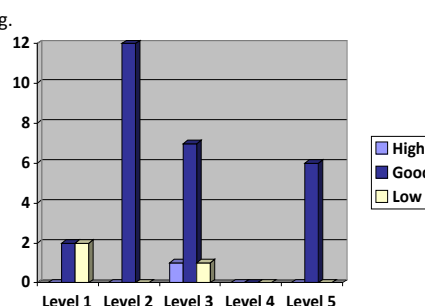


Figure 3: Quality and Strength Rating Tool

Johns Hopkins Evidence Based Practice Standard Grading Tool	
<b>Strength</b>	
Level I	Experimental study and meta-analysis of RCTs
Level II	Quasi-experimental study
Level III	Non-experimental study, qualitative study, or meta-synthesis
Level V	Opinion
<b>Quality</b>	
A	High
B	Good
C	Low or major flaw

Figure 4: Evidence Summary Chart



## Results

Among 31 selected studies, 2 of 4 RCT were without analysis. Quasi-experimental, non-experimental and qualitative studies were well designed and produced high quality conclusions. 6 editorials were included as the experts' opinions were based on high quality studies or RCTs.

All 31 publications reviewed support that, with strong quality and strength ratings, the combination of evidence based surveillance with shared decision making will produce the optimal outcome for patients, providers and health systems. The literature review also demonstrated with strong quality and varying ratings of strength that incorporating shared decision making into an intervention is still in the developmental phase. Among the key elements, the literature highlighted with high strength and quality rating that a crucial element to building a surveillance program is ultimately achieving mutual agreement with scheduled appointments.

## Limitations

The search was limited to the chosen search terms and databases. Only one person performed the quality and strength rating, which introduced the risk of bias. Limited number of quality randomized control studies was available for review.

## Conclusions

The reviewed literature demonstrated that an effective surveillance strategy is constituted by 1) evidence-based medicine 2) incorporating shared decision making strategies. Establishing a mutually agreed upon care plan with scheduled tests is suggested as the crucial element of surveillance development.