

Colorectal Cancer Screening Scoring Methodology

Technical Specifications V0

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Background

This document provides further background around the scorings provided in the below table.

Test	Interval	Per Screening Procedure Cost to Employer*+	Total Estimated screening cost Age 50-75#	Life Years Gained from Early Detection
Colonoscopy	Every 10 years	\$2300 - \$5100	Medium Anticipated Cost	Highest
FIT	Every year	\$130 - \$530 !	Low Anticipated Cost	Medium-High
FOBT	Every year	\$40 - \$410 !	Low Anticipated Cost	Medium-High
Sigmoidoscopy	Every 10 years plus FIT every year	\$1580 - \$1620	High Anticipated Cost	High
CT Colonography	Every 5 years	\$1330	Medium Anticipated Cost	Medium-High
Fecal DNA Testing	Every 3 years	\$550	Lowest Anticipated Cost	Medium

*Screenings should require 0 patient out of pocket but the amount your employer is charged by the hospital will vary based on type of test and location of service. Your * employer pays for your health care benefits directly rather than paying for insurance (read more link)*

+ Cost Per Screening encompasses a median of all typical charges rendered the same day as the screening

Modeled results of total estimated screening cost full methodology available here (link to some big ugly PDF)

The costs of the individual services for FIT and FOBT tests are typically very small (\$15- \$50) however it is typical this test is done in conjunction with other services done the ! same day. We show the estimated cost range based on provider billing and service practices for the entire Day of Service

Contact

For further questions regarding the methodology or data used, contact Ryan Peterson at The Alliance (rpeterson@the-alliance.org)

Test and Interval

There are a variety of modalities that may be used for colorectal cancer screening. These modalities are outlined by the US Preventative Task Force (USPTF). The recommended modalities also come from the USPTF as well as other sources.

Per Screening Procedure Cost to Employer

Cost is estimated for outpatient procedures in seven major steps from a rolling year of Alliance member administrative claim data.

1. Determine outpatient episode days with triggering procedures (CPT codes)
2. Determine all associated costs for incurred that day

3. Group the service day costs into major categories of services
4. Aggregate Median costs from each category of service and roll up the median costs to the location where the triggering procedure was performed
5. Identify aggregate costs at locations with at least 4 procedures
6. Identify cost ranges by looking at the low and high cost of the remaining locations

The CPT Codes used for each modality are listed below

Test	CPT Codes Used for Screening
Colonoscopy	45378, G0121
FIT	82274
FOBT	82770, G0328
Sigmoidoscopy	45330
CT Colonography	74261-74263
Fecal DNA Testing	81528

These costs were calculated using Alliance in-network claims data received over the course of the last year to give an accurate reflection of anticipated day of service costs which may encompass more services than only the CPT code of interest.

Total Estimated Screening Cost Age 50 – 75

A technical report was prepared by the Writing Committee of the Cancer Intervention and Surveillance Modeling Network (CISNET) Colorectal Cancer Working Group which modeled impact in terms of numbers of procedures, complications, and life years gained under 217 different colorectal cancer screening strategies across 3 independent models. The report was prepared for the Agency for Healthcare Research and Quality and acknowledges in the limitations section: *“we did not perform a comprehensive analysis directly comparing all available test strategies. Cost-effectiveness analysis would be a way to perform such a comprehensive analysis, however cost analysis is not part of the USPSTF evaluation.”*

The Alliance, as the negotiator of the provider contracts is suited to leverage the modeling work performed from the results of this technical report and add value by estimating total costs associated with each screening modality.

Procedural cost estimate ranges for each of the screening tests and, additionally, colonoscopy with biopsies and colonoscopy complication costs via the above methodology. The midpoint of each cost range was used to determine a typical cost / procedure which was injected into the model results to formulate an estimated cost for each of the 217 screening strategies in each of the 3 models.

Since the USPSTF recommended screening duration of ages 50-75 we limited the screening strategies to this age range. Results could then be compared directly for cost assuming 100% adherence. These were then scored relative to one another to provide indications of low, medium, and high cost for each screening strategy.

Life Years Gained from Early Detection

This metric comes directly from the technical report used. It is important to note all screening methodologies show more than 200 life years gained / 1000 lives screened when compared to no screening being done. For this reason, the lowest qualified category of Life Years Gained was listed as “Medium”.

References

“Evaluating the Benefits and Harms of Colorectal Cancer Screening Strategies: A Collaborative Modeling Approach”, <http://www.uspreventiveservicestaskforce.org/Home/GetFile/1/16450/cisnet-draft-modeling-report/pdf>, AHRQ Publication No. 14-0630-EF-2, October 2015