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## **A systematic review to evaluate the effectiveness and cost-effectiveness of personalised surveillance after colorectal adenomatous polypectomy**

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A systematic review to evaluate the effectiveness and cost-effectiveness of personalised surveillance after colorectal adenomatous polypectomy (CAP)

*Ethna McFerran, James O'Mahony, Richard Fallis, Duncan McVicar, Frank Kee, Ann Zauber*

### Citation

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### Review question

1. What are the effects of surveillance colonoscopy in patients with index adenoma on the incidence of colorectal cancer?
2. What is known about cost effectiveness of colonoscopy in surveillance?
3. What is the effectiveness of colonoscopy compared to alternative prevention strategies?
4. What are the potential trade-offs between costs (resource use) and beneficial or adverse effects that may need to be considered in a decision to adopt or reject personalising surveillance?

### Searches

The initial check is to be carried out on the CRD databases, to established PICOTS criteria.

This will be followed by the implementation of a planned strategy for searching other databases to include: MEDLINE; MEDLINE In-Process & other non-indexed citations and EMBASE from inception.

### Types of study to be included

Includes - Economic evaluations, where published as academic papers are eligible for inclusion. Excludes - Case series and case reports are excluded as are reports from grey literature and conference proceedings; these are excluded from the review owing to the high potential for bias in these study designs. Randomised controlled trials (RCTs) and controlled trials reported effects and other formats than controlled trials as such, cohort studies, case-control whilst considered within the quality evaluation of the models are not directly sought within the review.

### Condition or domain being studied

Patients diagnosed with (resected) colorectal adenomatous polyp(s) requiring ongoing surveillance assessments for the risk of colorectal cancer.

We focus here on studies which have evaluated the cost and benefit of any procedures or packages of care to manage this risk.

### Participants/population

Include - Patients diagnosed with (resected) colorectal adenomatous polyp(s).

Excludes - Patients with diagnosed colorectal cancer or sessile serrated adenomas.

### Intervention(s), exposure(s)

Includes - Interventions given for the management of colorectal cancer risk associated with the presence of a baseline adenoma, i.e. a follow-up examination, surveillance test or reassessment by an appropriate means including colonoscopy and comparators listed below.

Excludes - Not currently in clinical use outside of trial for e.g. novel biomarkers.

### Comparator(s)/control

Includes - Endoscopy, faecal occult blood testing (FOBT), faecal immuno-histochemical testing (FIT), or computed tomographic colonography (CTC).

Excludes - Tests in development / biomarker based tests not currently in clinical use outside of trial for e.g. novel biomarkers.

### Context

### Main outcome(s)

Costs, LYG, QALYs, DALYs or other unit of health gain.

### Additional outcome(s)

Incidence of adenoma; recurrent /metachronous adenoma; colorectal cancer; 'positive' tests (in the case of qualitative FOBT, FIT, +/- other investigational tests) where a positive results indicates the need for further clinical investigation to treat/ resect potential lesions detected; Costs, LYG, QALYs, DALYs or other unit of health gain.

### Data extraction (selection and coding)

(a) The results of the initial searches (through November 2015) will be downloaded into Mendeley, reference manager and duplicate articles retrieved from the multiple databases will be removed prior to initiating the review. The resultant search will be extracted into Excel.

(b) Titles and abstracts for all articles identified by the literature search will be screened against the PICOS criteria by two reviewers (E McFerran / Dr J F O'Mahony).

(c) The full texts of all articles deemed eligible from the previous stage will be reviewed to further confirm their eligibility. Quality evaluation of the full papers identified in (b) above will be conducted by two independent reviewers (E McFerran / Dr J F O'Mahony).

### Risk of bias (quality) assessment

In order to minimize bias a study shall be included in situations where both reviewers are not in agreement to exclude it. Such studies will subsequently be described separately in any analysis to reflect the potential for bias. Discrepancies will be resolved by discussion or the involvement of a third reviewer. All excluded papers will be codified by ineligibility of PICOS category.

### Strategy for data synthesis

The data extraction will be by the use of reporting template based on the CHEERS checklist - this will assist quality assessment giving detailed information on study characteristics using a standardized data collection form, based on the CHEERS guidelines that consolidated and updated prior checklists for reporting of health economic evaluations.

### Analysis of subgroups or subsets

None planned.

### Contact details for further information

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### Organisational affiliation of the review

Queens University Belfast

### Review team members and their organisational affiliations

Miss Ethna McFerran. Queens University Belfast  
Dr James O'Mahony. Trinity College Dublin  
Mr Richard Fallis. Queens University Belfast  
Professor Duncan McVicar. Queens University Belfast  
Professor Frank Kee. Queens University Belfast  
Professor Ann Zauber. Memorial Sloan Kettering Cancer Center

### Collaborators

Professor Ann Zauber. Memorial Sloan Kettering Cancer Center

### Type and method of review

Diagnostic, Epidemiologic, Intervention, Prevention, Systematic review

### Anticipated or actual start date

02 November 2015

### Anticipated completion date

31 March 2016

### Funding sources/sponsors

No specific funding for the review has been sought or received. The lead author is funded by HSC/NCI Health Economics Fellowship. Prof Ann Zauber acknowledges this research was funded in part through the NIH/NCI Cancer Center Support Grant P30 CA008748.

### Conflicts of interest

None known

### Language

English

### Country

Northern Ireland, Ireland, United States of America

### Stage of review

Review Completed not published

### Subject index terms status

Subject indexing assigned by CRD

### Subject index terms

Adenoma; Colorectal Neoplasms; Cost-Benefit Analysis; Costs and Cost Analysis; Humans; Patient Care; Patient-Centered Care; Treatment Outcome

### Date of registration in PROSPERO

22 January 2016

### Date of publication of this version

03 January 2017

### Details of any existing review of the same topic by the same authors

### Stage of review at time of this submission

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	Yes	Yes
Risk of bias (quality) assessment	Yes	Yes
Data analysis	Yes	Yes

### Revision note

Review now completed and accepted for publication.

*The record owner confirms that the information they have supplied for this submission is accurate and complete and they understand that deliberate provision of inaccurate information or omission of data may be construed as scientific misconduct.*

*The record owner confirms that they will update the status of the review when it is completed and will add publication details in due course.*

## Versions

22 January 2016

03 January 2017

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### PROSPERO

This information has been provided by the named contact for this review. CRD has accepted this information in good faith and registered the review in PROSPERO. The registrant confirms that the information supplied for this submission is accurate and complete. CRD bears no responsibility or liability for the content of this registration record, any associated files or external websites.