



**IPOS 2023**  
WORLD CONGRESS



# **COLO-SPIRIT**

COLOrrectal Symptoms after Pelvic RadioTherapy

## **Cancer treatment-related symptoms and toxicity management**

**Bowel Symptoms After Pelvic Radiotherapy:  
A Systematic Review and Narrative Synthesis.**

Adam Biran, Newcastle University



# Background

- Pelvic radiotherapy
  - Treat prostate, gynaecological & rectal cancers
  - But - can cause chronic symptoms – months/years/decades later
- Symptoms include **bowel symptoms**
  - e.g. diarrhoea, bleeding, incontinence
- Negative impact on Quality of Life

# Living with Bowel Symptoms

*'It's infantilising,...I'm nearly 40, I can't control when I go to the toilet... It makes you feel like you're a toddler...it feels very undignified, it's embarrassing...the idea you might have to tell work colleagues...that makes you feel unprofessional, it makes you feel pretty useless really...'*

(Jayne, 38, endometrial cancer)

# Living with Bowel Symptoms

*...everywhere I go ... I think where am I going to park, where's the toilet, where can I go, what can I do, where have I got to go, how can I get back to the car? And that's what I do. And that's really my life now.*

(Michael, 69, prostate cancer)

# Rationale for the Review

## Best Practice Pathway for Pelvic Radiation Disease



Treatment and mitigation possible but not always received.  
Gaps in service delivery.

Planning, advocacy and shared decision-making needs an evidence base



Pelvic Radiation  
Disease Association

# Need for Evidence

*'...it's difficult to provide services and policy for patients when we don't really even understand the scale of the problem.'*

(Therapeutic Radiographer)

# Objectives

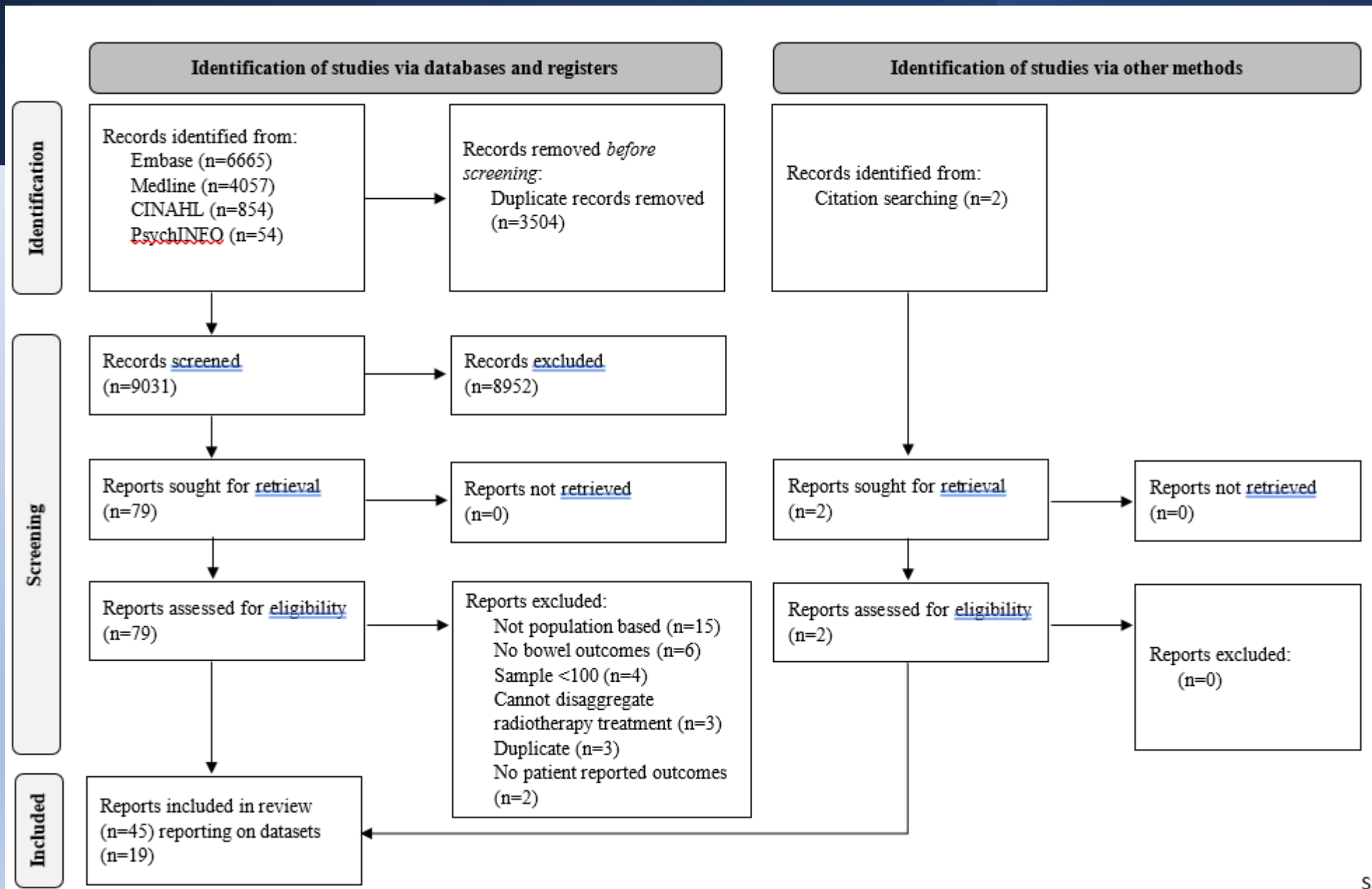
Systematically identify & synthesise data on bowel symptoms after pelvic radiotherapy:

- Symptom type, prevalence & severity
- Changes in prevalence over time since treatment
- Associations with survivor characteristics

# Methods

- EMBASE, Medline, CINAHL, PsychInfo – Inception to Sept. 2022
- Eligibility
  - Peer reviewed journal article
  - English
  - Population-based data on bowel symptom prevalence/severity  $\geq$  3 months post-radiotherapy
  - Patient Reported Outcome Measures
  - Sample  $\geq$ 100 treated with pelvic radiotherapy
- NOT colorectal or anal cancer







# Search Results

- 45 eligible papers from 19 datasets
- Majority prostate cancer (39 papers, 16 datasets)
- 9 countries
  - USA: 20 papers, 5 datasets
- 22 papers longitudinal & 23 cross-sectional data

# Symptoms reported

- 13 symptom types
- Several in only few papers

Symptom Type	Number of Papers
Bowel Function Score	26
Bowel Function Bother	19
Urgency	16
Bleeding	10
Incontinence	8
Diarrhoea	6
Pain	5
Painful Haemorrhoids	3
Wetness	3
Constipation	2
Mucous	2
Frequency	1
Gas	1

# Findings: Symptom Type and Prevalence

Symptom	# Papers	Prevalence Range (%)	
		Prostate	Gynaecological
Bowel function problem	19	6-47	
Urgency	16	4-36	29-44
Bleeding	10	1-59	7-17
Incontinence	8	2-14	12-43
Diarrhoea	6	14-37	16-42
Abdominal pain	5	10-26	27-48
Bowel frequency	1	7-35	

# Heterogeneity

- Cancer site – gynaecological cancers
- Measurement tool & definition of symptoms

# Heterogeneity in Data Collection Tools

<b>Data Collection Tool</b>	<b>Number of Papers</b>
<b>EPIC-26</b>	<b>23</b>
<b>UCLA PCI</b>	<b>4</b>
<b>PCSI</b>	<b>2</b>
<b>EORTC QLQ-PR25</b>	<b>2</b>
<b>EORTC QLQ-C30</b>	<b>2</b>
<b>EORTC QLQ-EN24</b>	<b>1</b>
<b>EPIC-50</b>	<b>1</b>
<b>Study Specific/Adapted</b>	<b>13</b>

# Heterogeneity

- Cancer site
- Measurement tool & definition of symptoms
- **Comparator group**

# Findings: Comparison with No Radiotherapy

- 5 papers compared with non-cancer group
  - All found greater prevalence / severity in radiotherapy group
- 25 papers compared with other treatment
  - All bar one found greater prevalence / severity in radiotherapy group



# Heterogeneity

- Cancer site
- Measurement tool & definition of symptoms
- Comparator group
- Timing of data collection relative to treatment



# Findings: Temporal Trends

- 10 papers pre V post-radiotherapy
  - Greater prevalence / severity post-radiotherapy
- No systematic timing of data collection
- No consistent pattern between or within symptoms
- 5 datasets reported symptoms at 2 or more time points
  - 7 reports of increase prevalence, 4 decrease, 1 no-change.
  - 2 symptoms reported by more than 1 dataset showed inconsistent results

# Heterogeneity

- Cancer site
- Measurement tool & definition of symptoms
- Comparator group
- Timing of data collection relative to treatment
- Radiotherapy techniques

# Comparisons of Radiotherapy Treatments

Comparison	Outcome measure	Result
Contemporary IMRT v 1990's EBRT	Bowel function	Contemporary RT better
Conventionally fractionated V Hypofractionated	Bowel function	No diff
Prostate only V Pelvic RT	Bowel function	No diff
Pelvic V Pelvic + Lymph Node	Bowel function	No diff
EBRT +/-Brachytherapy	Bowel function	No diff
	Urgency	No diff
	Blood in stool	+ Brachytherapy better

# Findings: Associations with Survivor Characteristics

- 3 papers
  - USA, Prostate Cancer
- Compared ethnic groups – African American / Hispanic / White
  - White – greater urgency
  - Hispanic – better bowel function
- Differences small and not clinically significant
- Sample sizes <100 for non-White groups

# Evidence Gaps and Data Collection Needs

- Bowel symptoms affect many survivors...
- Gaps
  - Population-based studies of gynaecological and less-studied cancers
  - Exploration of associations with survivor characteristics
- Needs
  - Greater consistency in tools and methods
  - Greater use of age and sex matched, non-cancer comparators

# Acknowledgements

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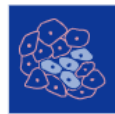
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3D-Matrix  
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 3-D MATRIX  
MEDICAL TECHNOLOGY

For more detail...

[Cancers | Free Full-Text | A Systematic Review of Population-Based Studies of Chronic Bowel Symptoms in Cancer Survivors following Pelvic Radiotherapy \(mdpi.com\)](#)





*cancers*



*Systematic Review*

## **A Systematic Review of Population-Based Studies of Chronic Bowel Symptoms in Cancer Survivors following Pelvic Radiotherapy**

Adam Biran <sup>1,\*</sup>, Iakov Bolnykh <sup>1</sup>, Ben Rimmer <sup>1</sup> , Anthony Cunliffe <sup>2</sup>, Lisa Durrant <sup>3</sup>, John Hancock <sup>4</sup>, Helen Ludlow <sup>5</sup>, Ian Pedley <sup>6</sup>, Colin Rees <sup>1</sup> and Linda Sharp <sup>1</sup> 

<sup>1</sup> Centre for Cancer, Population Health Sciences Institute, Newcastle University, Newcastle upon Tyne NE1 7RU, UK; iakov.bolnykh@newcastle.ac.uk (I.B.); ben.rimmer@newcastle.ac.uk (B.R.); colin.rees@newcastle.ac.uk (C.R.); linda.sharp@newcastle.ac.uk (L.S.)

<sup>2</sup> NHS Southwest London Clinical Commissioning Group, London SW19 1RH, UK; anthony.cunliffe@nhs.net

<sup>3</sup> Somerset NHS Foundation Trust, Taunton TA1 5DA, UK; lisa.durrant@somersetft.nhs.uk

<sup>4</sup> North Tees and Hartlepool NHS Foundation Trust, Hartlepool TS24 9AH, UK; j.hancock3@nhs.net

<sup>5</sup> Llandough, Cardiff and Vale University Health Board, Cardiff CF64 2XX, UK; helen.ludlow@wales.nhs.uk

<sup>6</sup> Newcastle upon Tyne Hospitals NHS Trust, Newcastle upon Tyne NE3 3HD, UK; ian.pedley@nhs.net