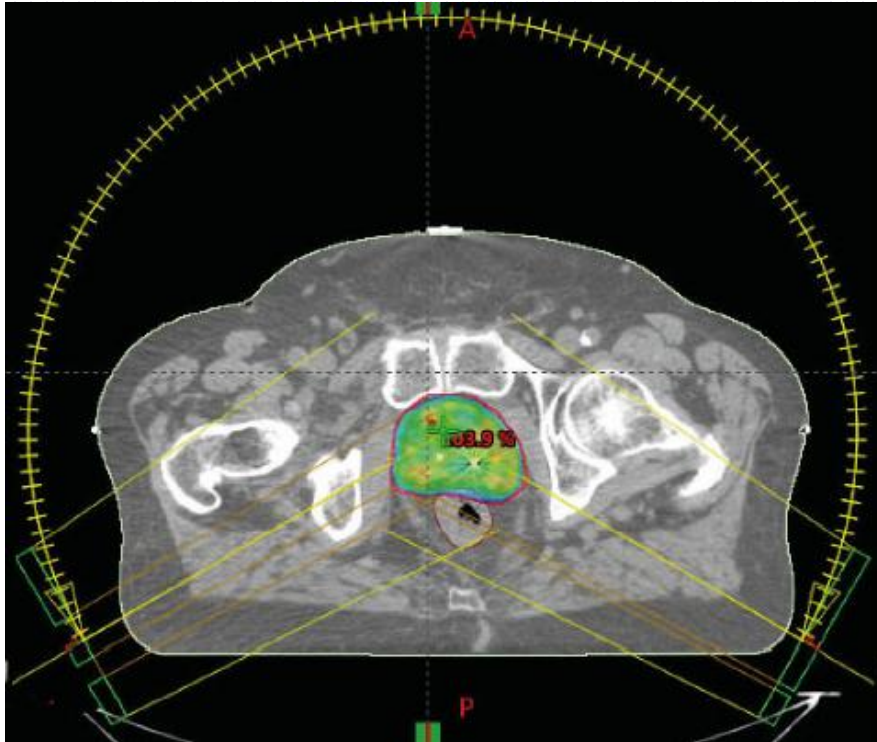




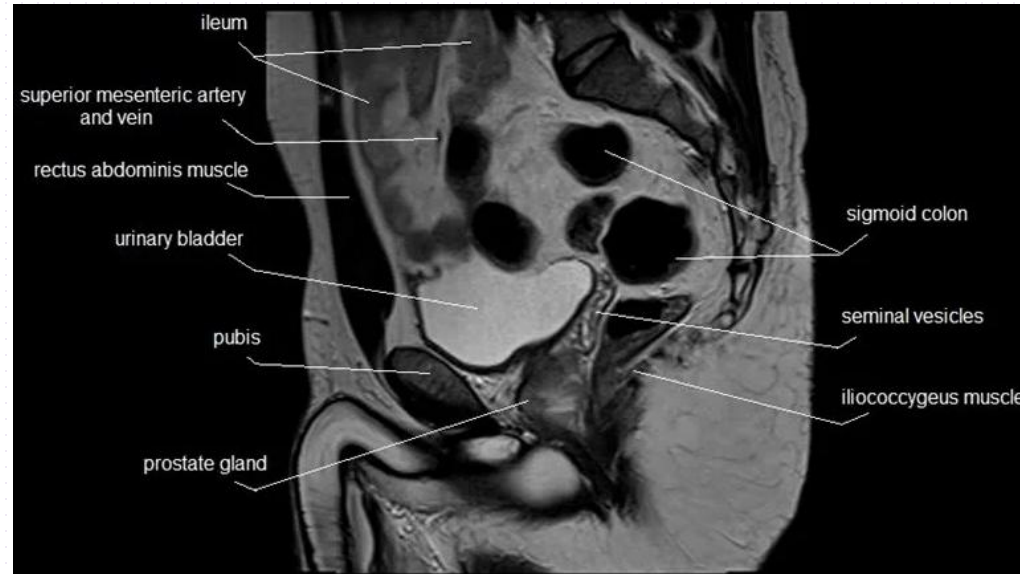
Optimising review schedules for patients receiving SABR for Localised Prostate Cancer

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Background & Introduction

- Prostate cancer is the most common cancer in men in the UK (~63,000 cases annually).
- SABR delivers high radiation doses in fewer fractions than CRT, (typically $\geq 6\text{Gy}$ per fraction).
- SABR offers radiobiological advantages with improved tumour control.
- However, dose intensification of dose may increase acute GU and GI toxicities which impacts on QoL.



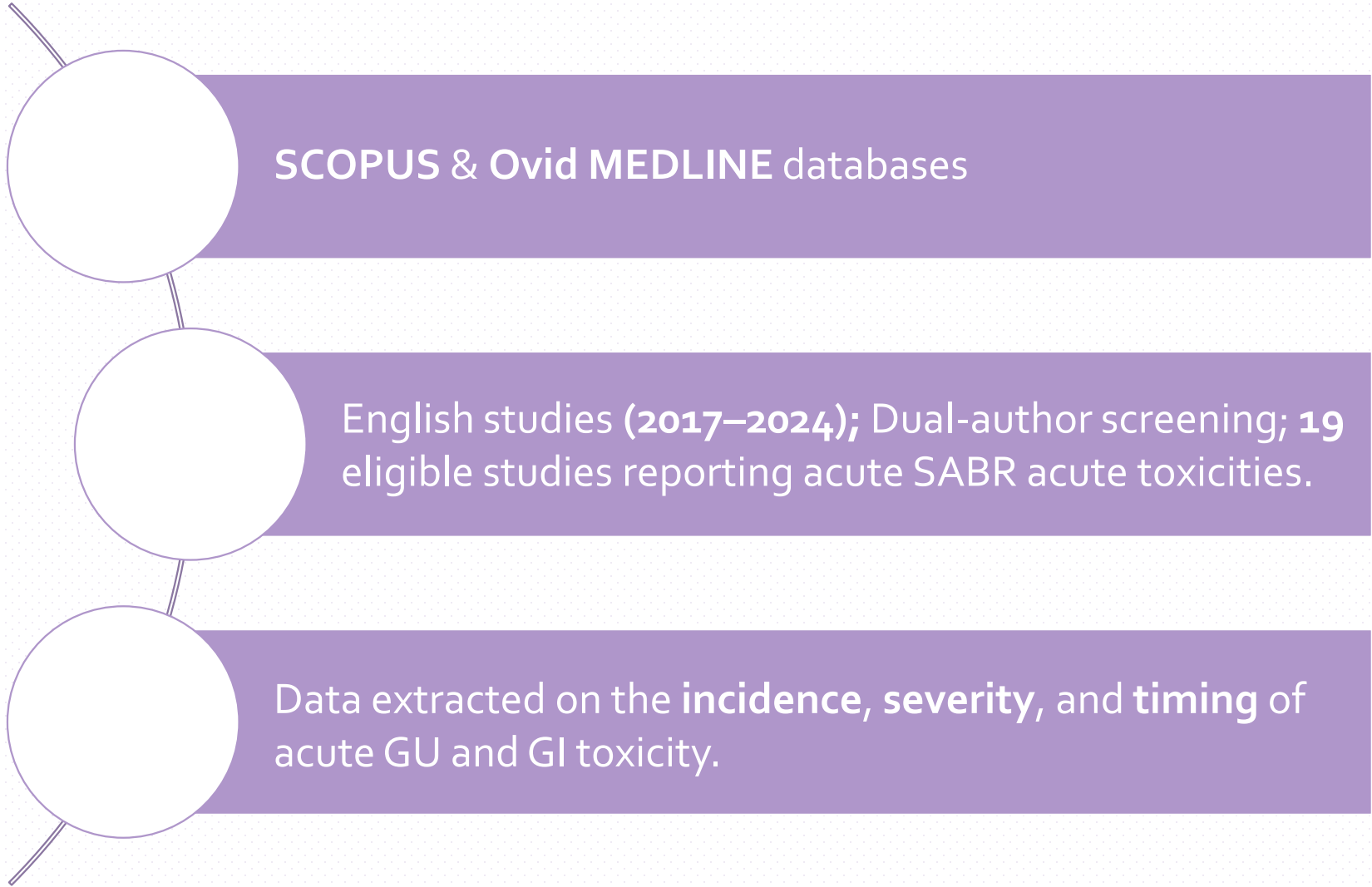
Objective of Review

Limited evidence exists regarding when acute toxicities begin or peak with SABR, leading to worldwide variability in review schedules.

Primary aim:

- To synthesise existing literature regarding acute GU & GI toxicities following prostate SABR.
- To identify patterns in toxicity including the timing of which they occur and their severity.
- **To inform an optimal schedule for on-treatment and post treatment review.**

Methods: Narrative Review

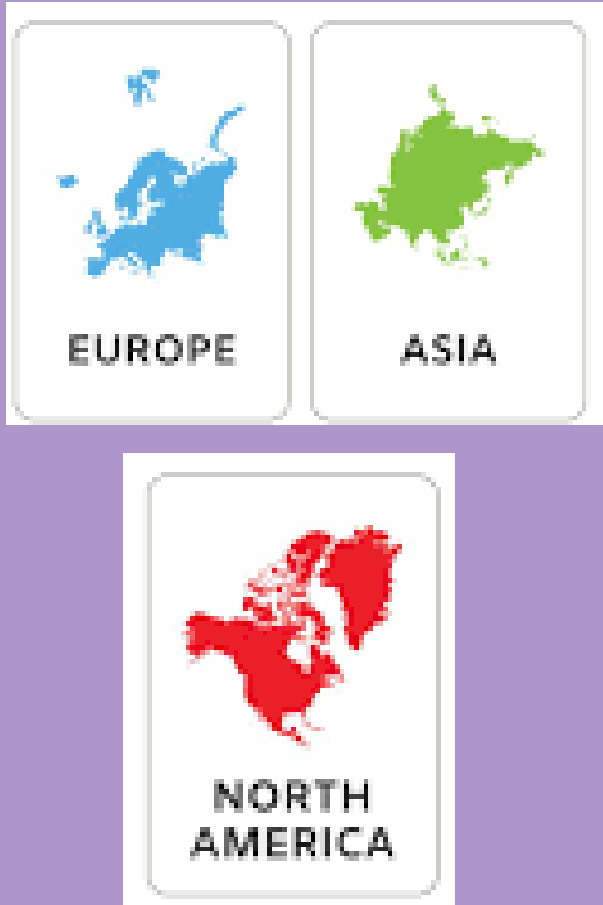


SCOPUS & Ovid MEDLINE databases

English studies (**2017–2024**); Dual-author screening; **19** eligible studies reporting acute SABR acute toxicities.

Data extracted on the **incidence, severity, and timing** of acute GU and GI toxicity.

Results



19 eligible studies- international evidence base

- 4 RCTs (multi-center)
- 15 QEDs

Treatment Variation

- Linac based SABR for localised prostate cancer
- Variation in total dose and fractionation schedules
- Daily, alternate-day and weekly delivery

Toxicity Reporting

- CTCAE (10 studies)
- RTOG (9 studies)
- Grade 2 toxicity analysed
- Grade 3 events rare

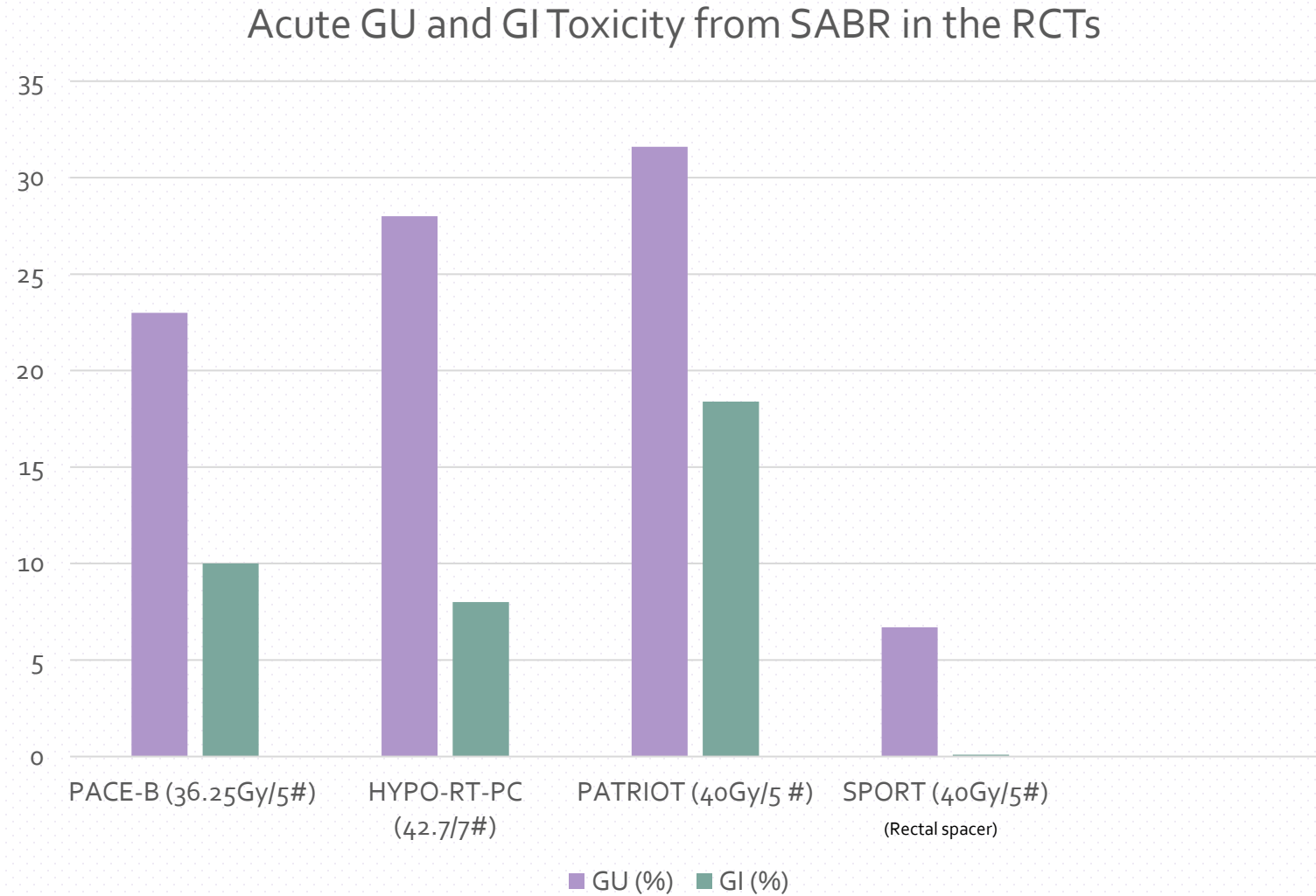
Key Toxicity Patterns

When do acute toxicities occur following prostate SABR?

GU Symptoms	GI Symptoms
More common	Less common
Earlier onset	Later onset
Typically peaks from end of treatment to ~2 weeks post-SABR	Typically peaks ~2-4 weeks post-SABR completion

- Overall acute toxicity from SABR across pivotal RCTs (PACE-B, HYPO-RT-PC) is broadly comparable or slightly higher than conventional or moderately hypofractionated radiotherapy, (supporting its clinical safety).
- Most acute symptoms resolve largely within 3 months
- Patient-reported outcomes often show greater symptom burden than clinician grading.

Acute Grade 2 Toxicity Across Key Studies



Dose, fractionation and technology

Dose & Fractionation

- Higher dose (around 40–45 Gy in 5–7 fractions)/ compressed schedules are linked with higher Grade 2–3 GI/GU toxicity.
- Alternate-day or weekly schedules show lower toxicity and faster recovery, supporting longer inter-fraction intervals.

Technology

- Rectal spacers, IGRT and beam modification like flattening-filter-free beams reduce GI toxicity and may improve tolerability, but GU toxicity is less affected.

Key Findings and Implications for Review Schedule

Toxicity finding should inform review timing

Toxicity Peak	Time Point
GU	Treatment completion- 2 weeks post SABR
GI	2-4 weeks post SABR

GU toxicity is more common and peaks earlier than GI toxicity

Proposed on-treatment and early post-treatment review timing

- End of treatment
- 4 weeks post-SABR

Additional considerations

- Weekly SABR schedules may required delayed review timing- review timing should be adjusted accordingly.
- Integration of patient-reported outcomes into reviews to avoid under-reporting toxicity.

Limitations

Heterogeneity of Evidence

- Variation in dose and fractionation schedules
- Different toxicity grading systems (CTCAE vs RTOG)
- Variation in assessment time points and reporting of CROs v PROs.

Challenges in Determining Toxicity Timing

- Many studies reported cumulative toxicity at 3 months without intermediate time points
- Limited ability to identify the precise onset and peak incidence of toxicity.

Narrative reviews are more susceptible to selection and interpretation bias.

Omission of SBRT as a search term may have excluded some relevant international studies.

Broad overview rather than a quantitative aggregation of evidence.

Future & Challenges

Future Research

- Standardisation of toxicity grading systems
- Consistent toxicity assessment time points
- Greater integration of PROs

Clinical Implementation Challenges

- Integrating PROs into standard practice
- Ensuring patient compliance with symptom reporting
- Software and technological requirements
- Adaptation of review schedules for difference SABR schedules

Local Relevance: INSPIRE Clinical Trial

- Prostate SABR is likely to begin with the clinical trial **INSPIRE**: INnovative SABR for Prostate cancer all IREland
- Currently in the set up phase by NICTN and CTI
- NWCC will follow this protocol/ review schedule

Dose: 33.25Gy to PTV, 35Gy to CTV and 40-50Gy to DIL in 5#s, E.O.D

Follow- up: Acute toxicity assessment at weeks 2, 4,8 and 12 using v5 NCI CTCAE.

Conclusion

- SABR has a favourable acute toxicity profile comparable to or slightly higher than CRT.
- Acute toxicity is influenced by total dose, fractionation spacing, and treatment schedule.
- Extended treatment schedules, rectal spacers, FFF delivery and IGRT may help mitigate toxicity.
- GU and GI toxicities follow different temporal patterns; therefore, review timing should reflect toxicity timing.
- An end-of-treatment review followed by a review at approximately 4 weeks post-SABR may improve detection of peak toxicities and support patient quality of life.

References

- McKenna G, Flood T. Optimising on-treatment review schedules... Radiography. 2026;32(3):103357. DOI: 10.1016/j.radi.2026.103357

