

Project scope: Surface Guided Radiation Therapy (SGRT)

December 2025

Research question(s)

What is the clinical effectiveness, cost effectiveness, safety and patient experience of using Surface Guided Radiation Therapy (SGRT) compared with standard laser-based positioning with skin marks/tattoos set-up in patients undergoing external beam radiotherapy?

Inclusion criteria

The selection of studies for inclusion in the literature review element of the project will be based on the following criteria:

Population	Patients receiving external beam radiotherapy for cancer
Intervention	SGRT for patient positioning and monitoring during treatment
Comparator	Standard laser-based positioning with skin marks/tattoos set-up
Outcomes	<p><i>Outcomes may be grouped by specific radiotherapy procedures</i></p> <ul style="list-style-type: none"> ■ set-up accuracy/set-up time ■ treatment time (time per fraction) ■ procedural quality ■ all outcomes related to safety, including radiation exposure / dose ■ clinical workflow (through-put of patients) ■ patient satisfaction ■ costs and resource use ■ cost effectiveness (cost per QALY) ■ <i>all outcomes reported in the literature</i>
Setting	Radiotherapy treatment centres
Limits	<ul style="list-style-type: none"> ■ English language only ■ studies that are applicable to the context in NHSScotland

Planned activities

The Scottish Health Technologies Group (SHTG) have agreed to the following activities to support an SHTG advice on SGRT:

1. A comprehensive search, critical appraisal and synthesis of the literature on the clinical

effectiveness, cost effectiveness, safety and patient perspectives related to the use of SGRT.

2. Economic modelling or costing work, if there is sufficient data to allow this.
3. Engagement with clinical experts through peer review.
4. Development of a plain language version of the advice.

End products

At the end of the project, SHTG will publish:

- SHTG advice
- a plain language summary

Timescales (approximate)

Final draft to be ready by Summer 2026