

# Surgery guided by indocyanine green enhanced fluorescence

## Clinical question, PICOS and Search Strategy

### Setting: Spleen and Adrenal Surgery

Clinical question: **Would indocyanine green - enhanced fluorescence surgery, rather than surgery without fluorescence - improve the outcome of patients after spleen and adrenal surgery?**

**P = Population or Patient group:** patients who underwent standard, laparoscopic or robotic surgery for adrenalectomy, partial/bilateral adrenalectomy, splenectomy.

**I= Intervention:**

- adrenalectomy with the use of ICG fluorescence for adrenal gland identification;
- adrenal sparing surgery with the use of ICG fluorescence for adrenal tumor identification
- splenectomy/partial splenectomy/splenopancreasectomy/spleen preserving surgery with ICG enhanced fluorescence

**C= Comparator:**

- adrenalectomy without the use of ICG fluorescence for adrenal gland identification;
- adrenal sparing surgery without the use of ICG fluorescence for adrenal tumor identification
- splenectomy/partial splenectomy/splenopancreasectomy/spleen preserving surgery without ICG enhanced fluorescence

**O = Outcomes:** organ and tumor identification, vascularization/ischemia assessment, intraoperative complications, operating time, mortality, morbidity

**S = Study design**

- Primary research: randomised controlled trials (RCTs), controlled cohort studies, case control studies
- Secondary research: systematic reviews and meta analysis

|                        |                                                            |           |                                        |           |                               |
|------------------------|------------------------------------------------------------|-----------|----------------------------------------|-----------|-------------------------------|
| <b>Keyword A</b>       | Indocyanine green - ICG                                    |           |                                        |           |                               |
| <b>Keyword B</b>       | near infreared fluorescence, fluorescence enhanced surgery |           |                                        |           |                               |
| <b>Keyword C</b>       | Adrenalectomy, partial adrenalectomy, adrenal cancer       |           |                                        |           |                               |
| <b>Keyword C</b>       | Splenectomy, spleen preserving surgery                     |           |                                        |           |                               |
| <b>Search strategy</b> | Indocyanine green (ICG)                                    | <b>OR</b> | near infreared fluorescence            | <b>OR</b> | fluorescence enhanced surgery |
|                        |                                                            |           |                                        |           |                               |
| <b>AND</b>             | Adrenalectomy, partial adrenalectomy, adrenal cancer       | <b>OR</b> | Splenectomy, spleen preserving surgery | <b>OR</b> | Endocrine surgery             |

**Search methods for identification of studies:** all sources searched, including: databases, trials registers, websites and grey literature; all types of studies included: case series, clinical trials, review and meta-analysis - **English language only**

## Search Strategy

### Pubmed

(((((("Endocrine Surgery") OR "Endocrine Surgical Procedures"[Mesh])) OR ("adrenalectomy" OR "adrenal cancer" OR "splenectomy")))) AND (((((((("Indocyanine Green"[Mesh] OR "Fluorescent Dyes"[Mesh] OR "indocyanine green" OR wofaverdin OR vophaeverdin OR fluorescen\* OR cw800\*)) OR ("near infrared fluorescence" OR "near infrared fluoresce imaging"))))))))

### Embase

((((((((endocrine surgery) OR splenectomy) OR adrenalectomy) OR "Endocrine Gland Neoplasms/surgery"[Mesh])) AND (((((((indocyanine green) OR fluorescent dyes) OR wofaverdin) OR vophaeverdin) OR (fluorescence OR fluorescent)) OR cw800\*)) OR "near infrared")) AND ((indocyanine) OR Indocyanine Green OR wofaverdin OR vophaeverdin)