

Surgery guided by indocyanine green enhanced fluorescence

Clinical question, PICOS and Search Strategy

Setting: LIVER SURGERY

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

P = Population or Patient group: patients who underwent standard, laparoscopic or robotic surgery **(liver resection for hepatic lesions – primary or metastatic tumor)**

I= Intervention: surgical procedure (standard, laparoscopic, robotic) with fluorescent properties of indocyanine green (ICG)

C= Comparator: surgical procedure (standard, laparoscopic, robotic) without fluorescent properties of indocyanine green (ICG)

O = Outcomes: mortality, morbidity, operating time, re-operation, re-admission, identification of lesion, improving surgical procedures in term of radicality of intervention and reducing bile leakage

S = Study design

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

Keyword A	Indocyanine green			
Keyword B	Hepatic surgery			
Keyword C	Liver resection			
Keyword C	Fluorescence guided surgery			
Search strategy	Indocyanine green	OR	Fluorescence guided surgery	
AND	Hepatic surgery	OR	Liver resection	

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-analysys
English language only

Search strategy

Pubmed

((("Liver"[Mesh] OR hepatic*) AND (liver-metastases* OR "hepatic lesion" OR "hepatic resection" OR "hepatic neoplasm" OR "hepatic margin") AND ("surgery"[Subheading] OR surger* OR surgeo* OR surgi* OR resect* OR "Laparoscopy"[Mesh] OR laparosc* OR laparoendosc* OR celioscop* OR "Minimally Invasive Surgical Procedures"[Mesh] OR "Robotic Surgical Procedures"[Mesh]) AND ("Indocyanine Green"[Mesh] OR "Fluorescent Dyes"[Mesh] OR "indocyanine green" OR wofaverdin OR vopaverdin OR cw800*) OR ("near infrared fluorescence" OR "near infrared fluorescence imaging"))))

Embase

('Indocyanine Green' OR 'Fluorescent Dyes'/exp OR 'indocyanine green'/exp OR wofaverdin OR vopaverdin OR cw800*) OR ('near infrared fluorescence' OR 'near infrared fluorescence imaging')
AND (('liver'/exp OR 'hepatic'/exp) AND ('liver metastases' OR 'hepatic lesion' OR 'hepatic resection' OR 'hepatic neoplasm' OR 'hepatic margin'))