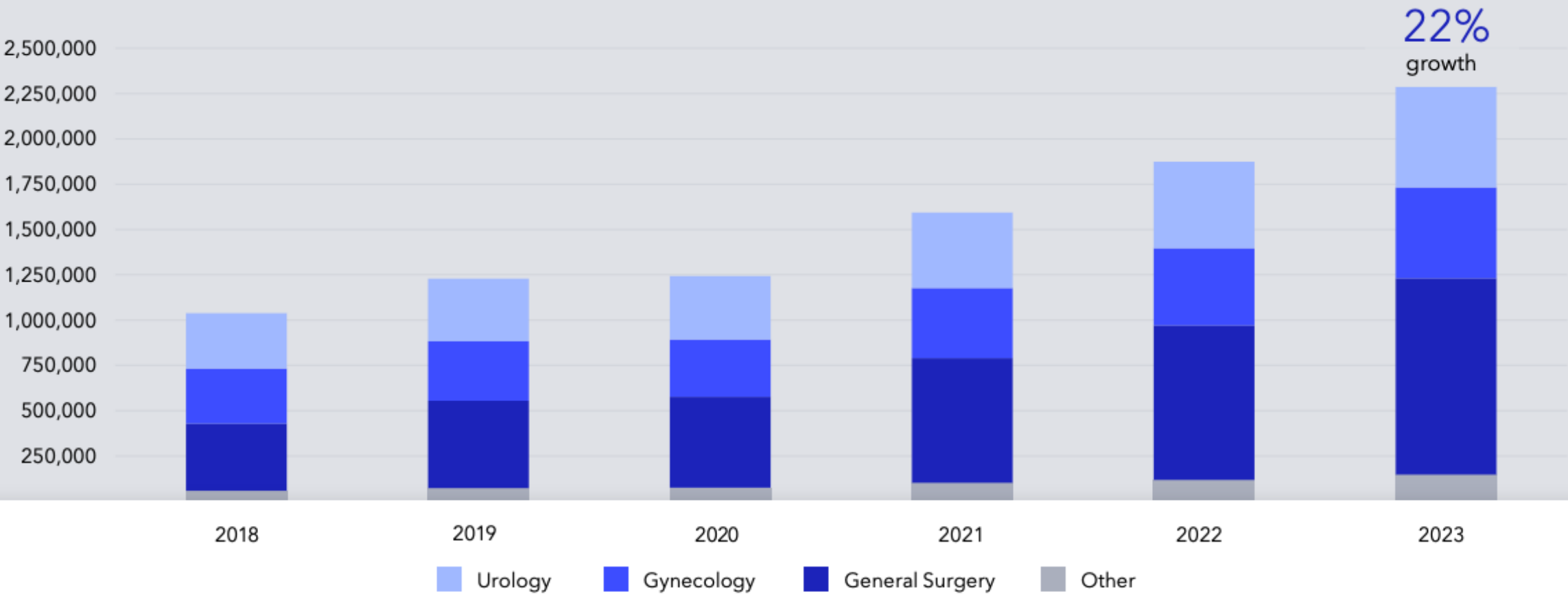


SFOG Pro Robot Benign

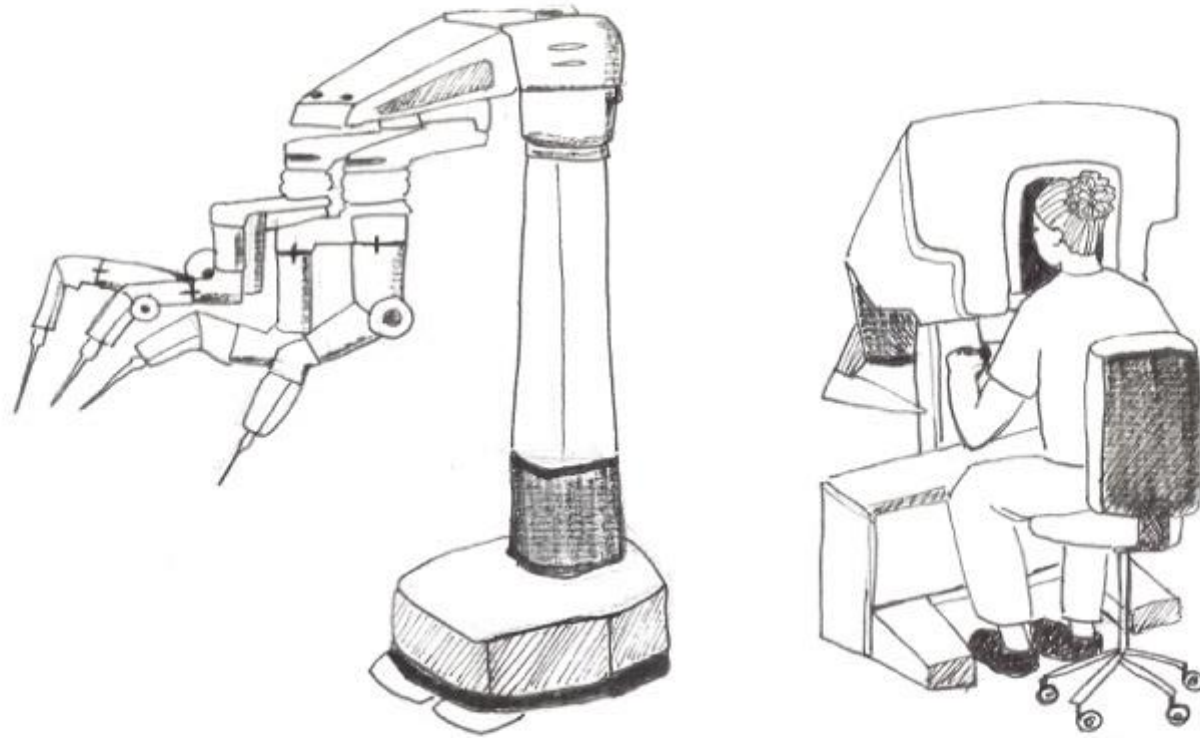
Malin Brunes Södersjukhuset

Worldwide procedure trend



Source: Intuitive 2023 earnings.

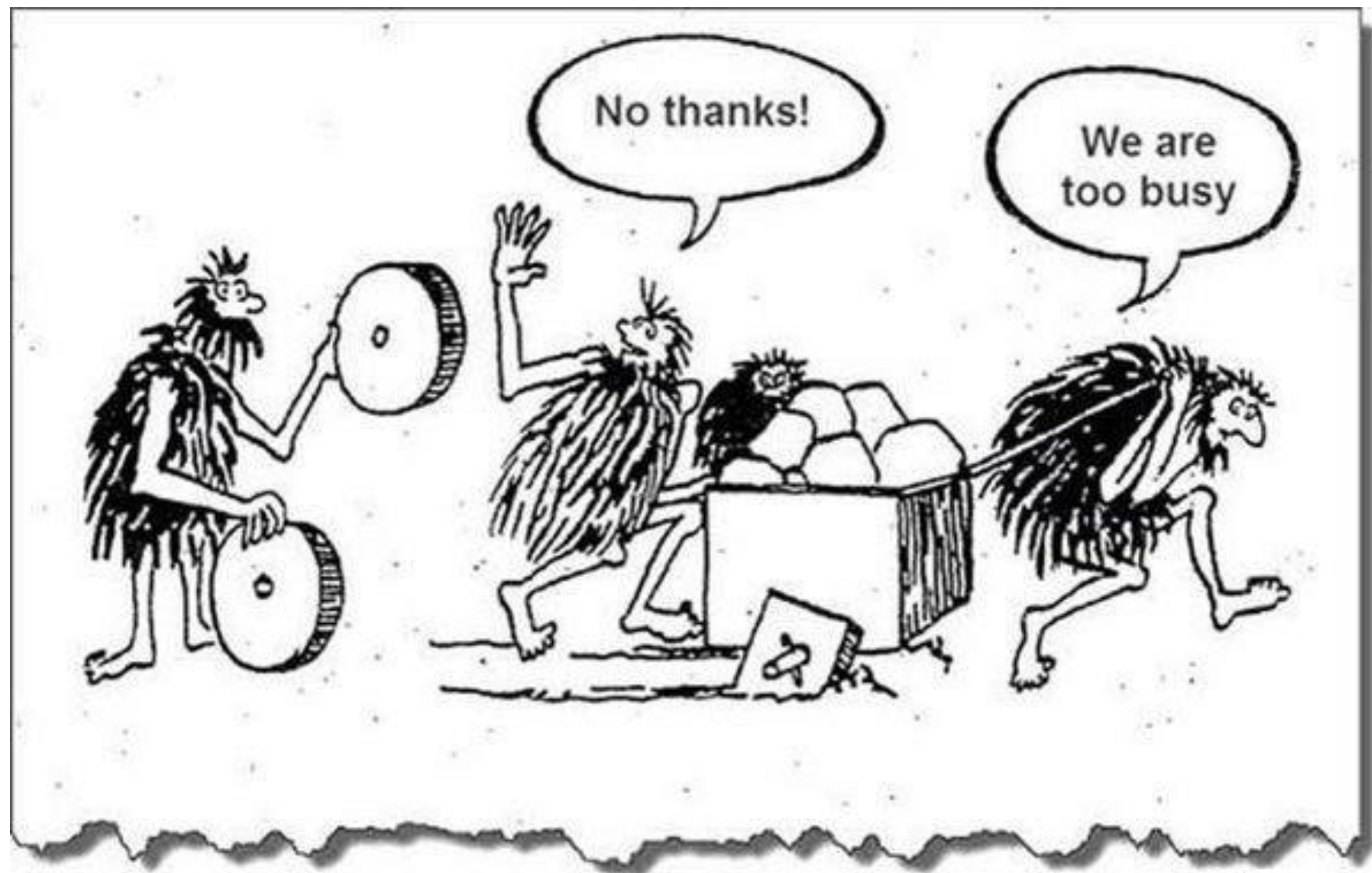
Vad är robotassisterad titthålskirurgi?





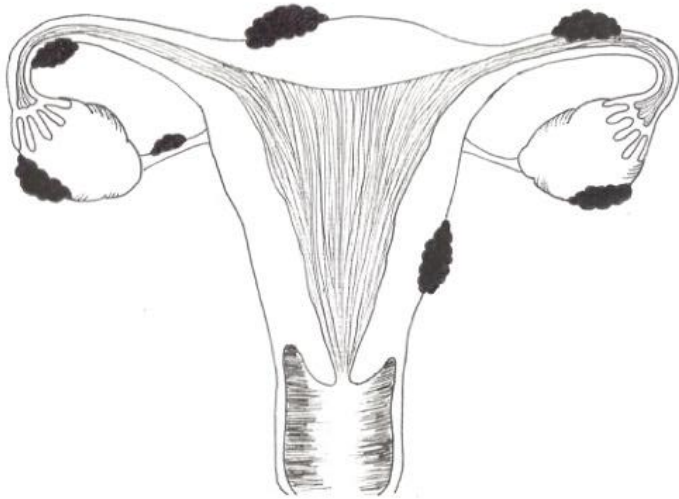
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Varför opereras patienterna?

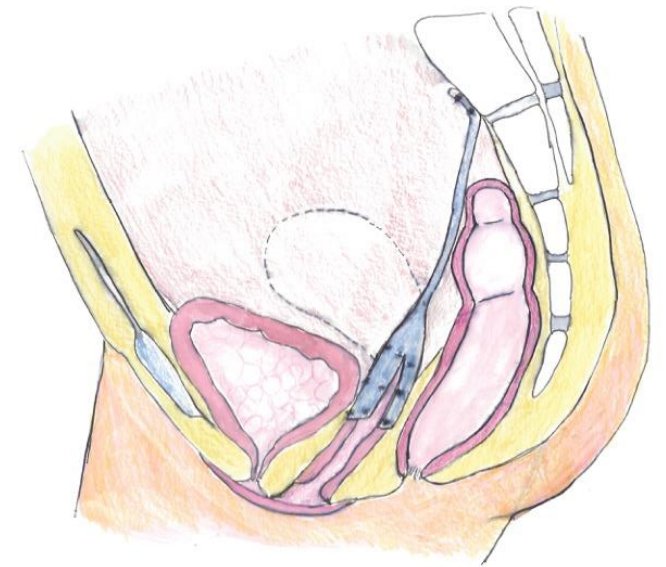
Livmoderoperationer



Operation av muskelknutor

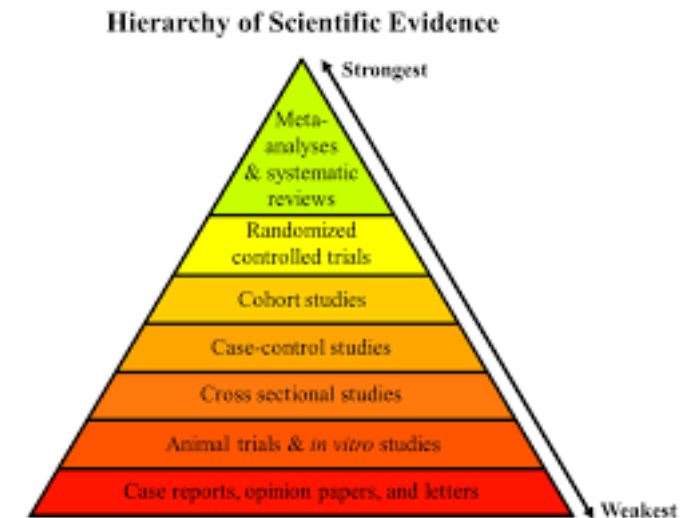


Framfall



RCT – robotkirurgi vs andra metoder

- Små studier som utvärderar ovanliga utfall (Komplikationer)
- Operatörer erfarna – men nybörjare på robot
- RCT saknas helt för komplex endometrioskirurgi och myomenukleation



Apikal prolaps – Cochrane Maher 2023

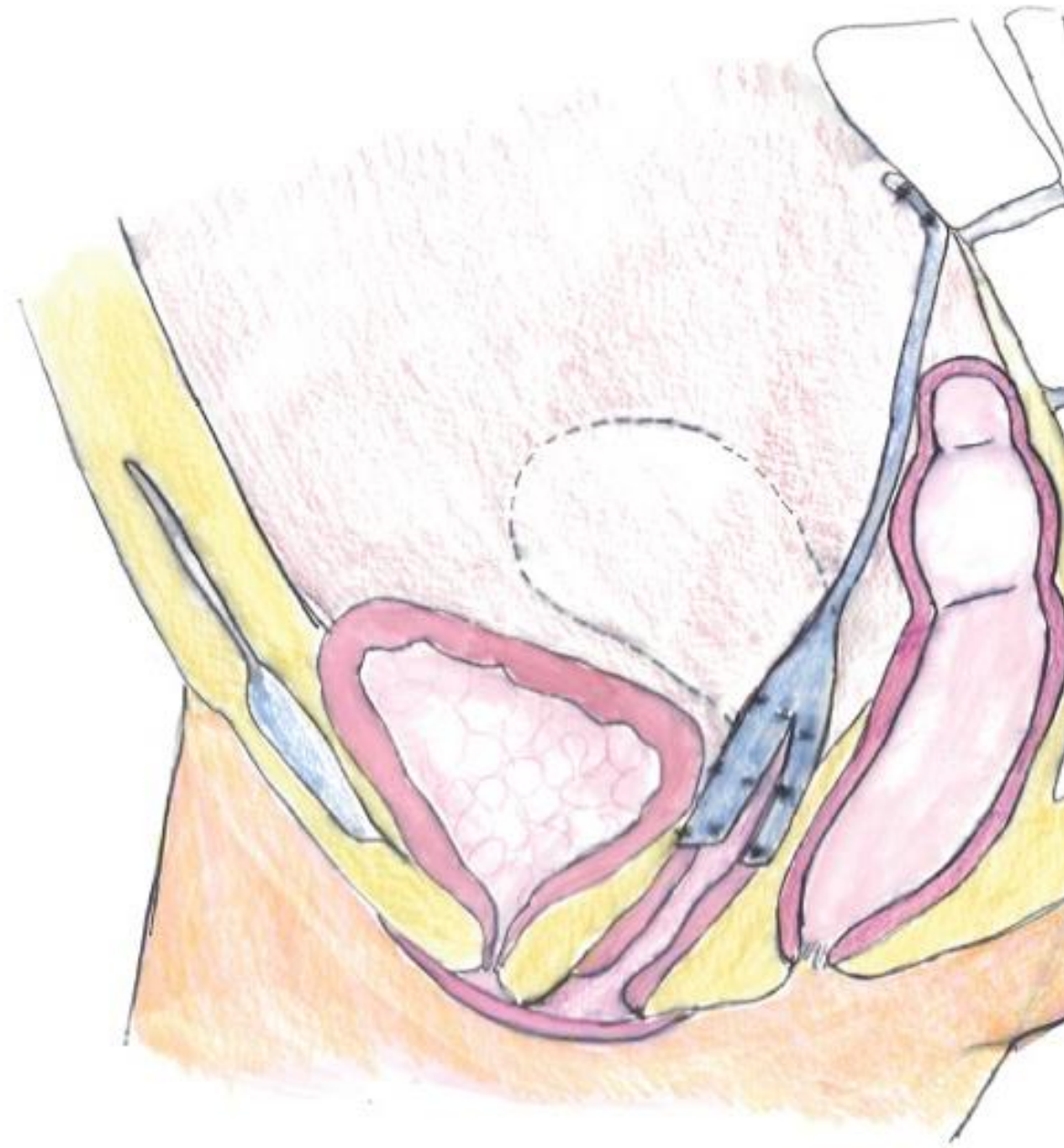
Sakrokolpopexi vs vaginala ingrepp

Globus 7.6% vs 17.5% RR 2.3 (1.3-4.2) ⊕⊕⊕⊖

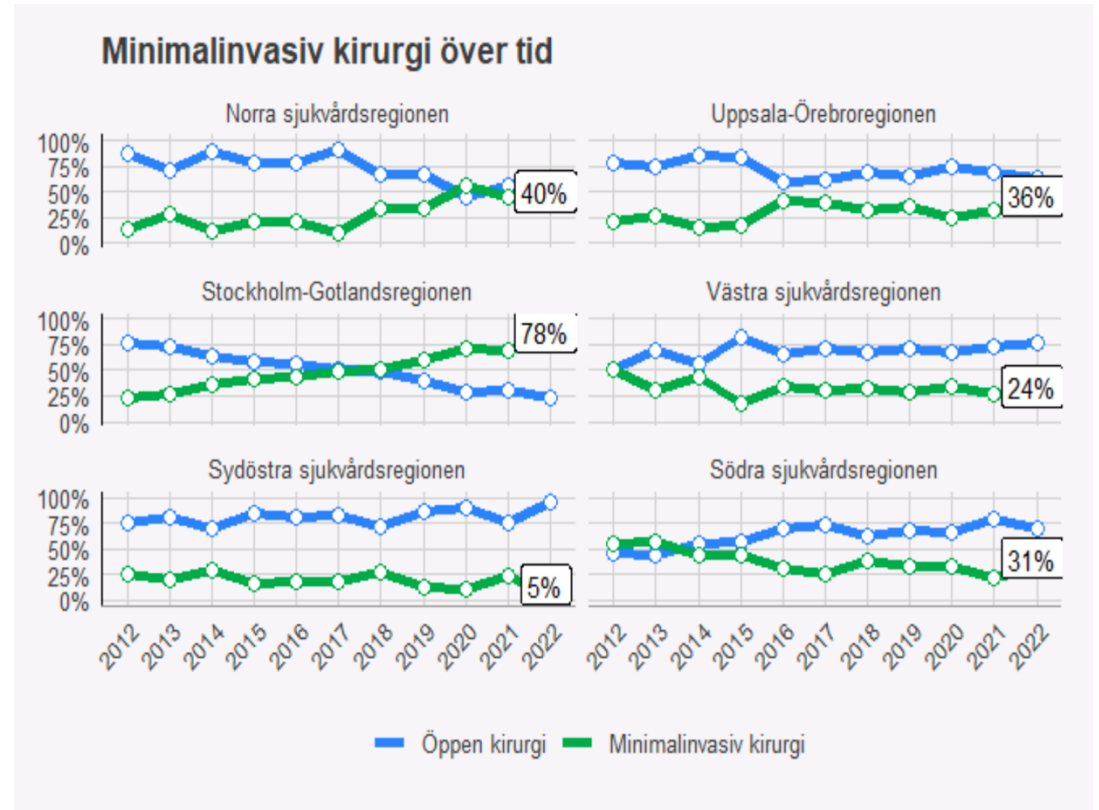
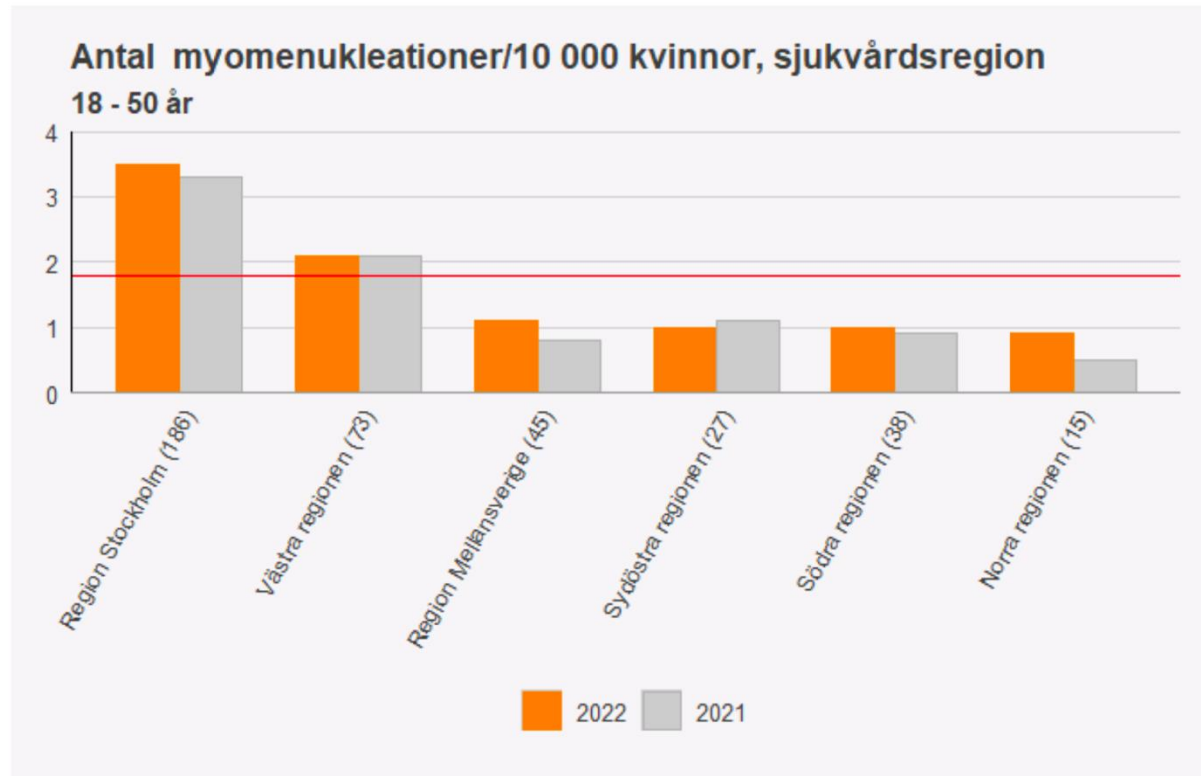
Reoperation 6.1% vs 14.2% RR 2.3 (1.3-2.7)
⊕⊕⊕⊖

Laparoskopi vs robot (3 RCT 2011, 2014, 2019)

Ingen skillnad förutom optid längre i robot
⊕⊕⊖⊖



Sverige - myomenukleationer



Hysterektomi – Cochrane rev. 2023

Surgical approach to hysterectomy for benign gynaecological disease (Review)

Pickett CM, Seeratan DD, Mol BWJ, Nieboer TE, Johnson N, Bonestroo T, Aarts JWM

VH förstahandsalternativ – men vad gör vi när operatören inte vågar!!!



När VH inte går att utföra är LH bättre än AH- kortare återhämtning, färre infektioner, färre blodtransfusioner

men högre risk för ureterskada och längre operationstid (LH vs AH)

- RH och V-NOTES behöver utvärderas mer då det saknas tillräckligt med RCT för att visa patientnytta

Kostnad – SÖS 2023

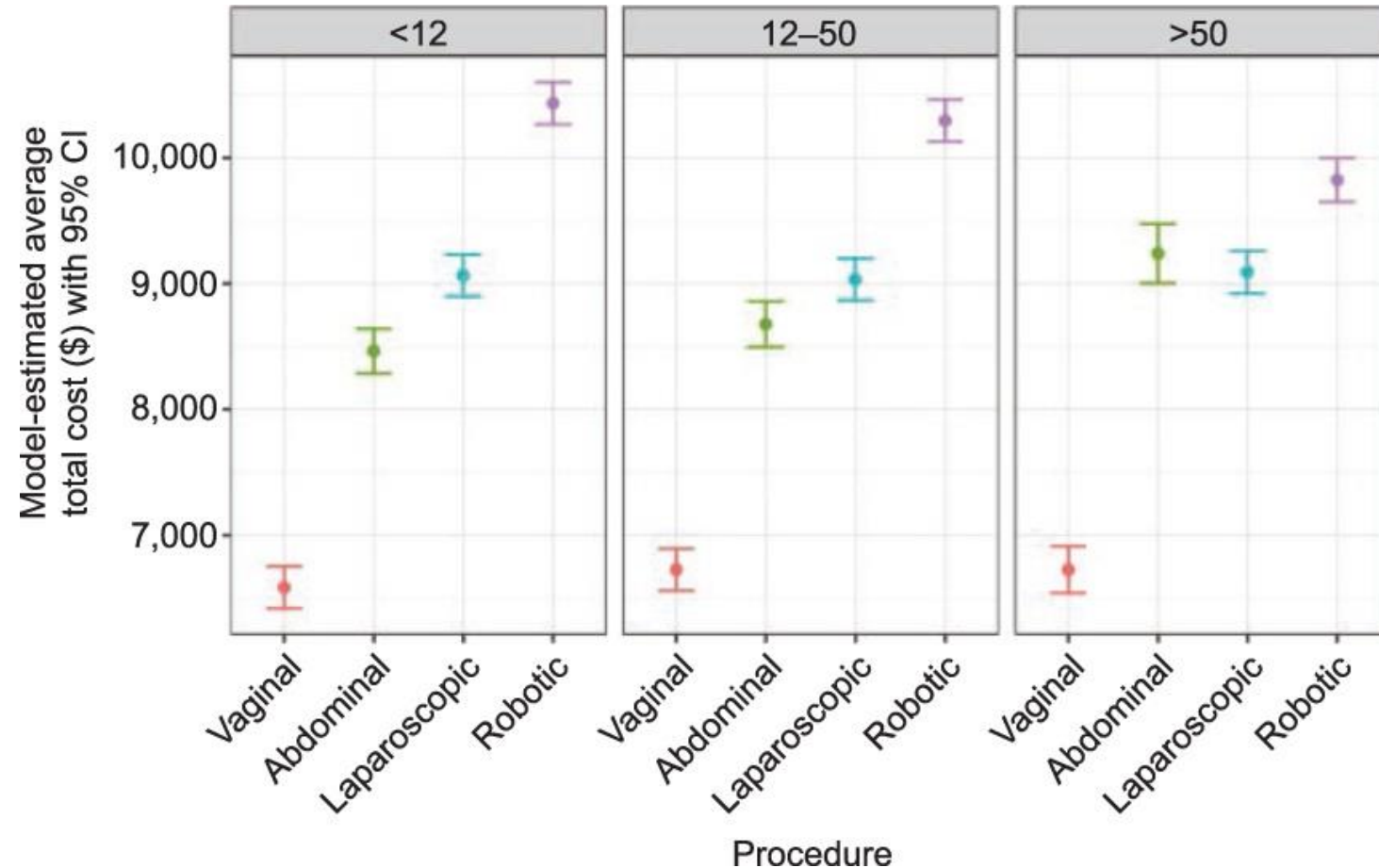


Lap hyst	Pris
Elevator Pro	880
PrimePAd antiGlid	700
Sug och spol elefant	360
Thunderbeat Olympus	4195
Troakar 5mm	205
Troakar 5mm	205
Kii baloon 5mm	475
Troakar 12 mm	300
V-loc 23cm	184
total kostnad	7504

Enkel robothyst, reducerad port	Pris
Elevator Pro	880
PrimePAd antiGlid	700
V-loc 30cm	184
Rob Monopolar	3193
Rob Fenestrated bipolar	1892
Rob MegaNeedle	2449
Troakar 5 mm	275
Sug och spol	229
CannulaSeal rob	609
Draping	1500
total kostnad	11911

V-notes	Pris
PrimePAd antiGlid	700
Sug och spol elefant	360
VNOTES + Voyant	5600
PDS	184
total kostnad	6844

Kostnad – ca 400 000 patienter, år 2000-2020



Varför
robotkirurgi?





Ergonomiska fördelar



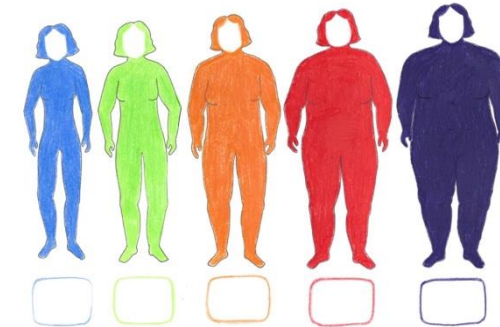
Robotic Surgery Is Less Physically Demanding Than Laparoscopic Surgery:
Paired Cross Sectional Study [Torur Dalsgaard et al Ann Surg 2020](#)



Original Article

Effects of Obesity on Peri- and Postoperative Outcomes in Patients Undergoing Robotic versus Conventional Hysterectomy

Malin Brunes, MD, Ulrika Johannesson, MD, PhD, Henrike Häbel, PhD, Marie Westergren Söderberg, MD, PhD, and Marion Ek, MD, PhD



Received: 16 November 2020 | Revised: 25 March 2021 | Accepted: 12 April 2021

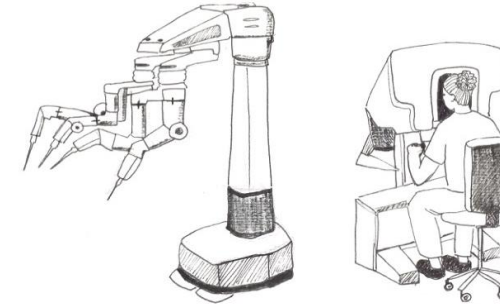
DOI: 10.1111/aogs.14166

ORIGINAL RESEARCH ARTICLE



Assessment of surgeon and hospital volume for robot-assisted and laparoscopic benign hysterectomy in Sweden

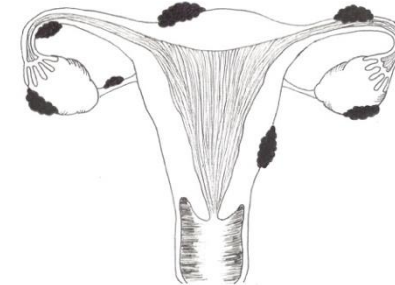
Malin Brunes^{1,2} | Catharina Forsgren^{3,4} | Anna Warnqvist⁵ | Marion Ek^{1,2} | Ulrika Johannesson^{3,4}



Contents lists available at ScienceDirect

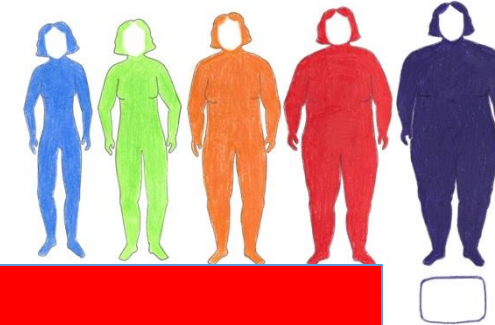
European Journal of Obstetrics & Gynecology and Reproductive Biology

journal homepage: www.journals.elsevier.com/european-journal-of-obstetrics-and-gynecology-and-reproductive-biology



Peri- and postoperative outcomes in patients with endometriosis undergoing hysterectomy

Malin Brunes^{a,b,*}, Ulrika Johannesson^{c,d}, Henrike Häbel^e, Catharina Forsgren^{c,d}, Gaby Moawad^f, Marion Ek^{a,b}



Kortare
operationstid

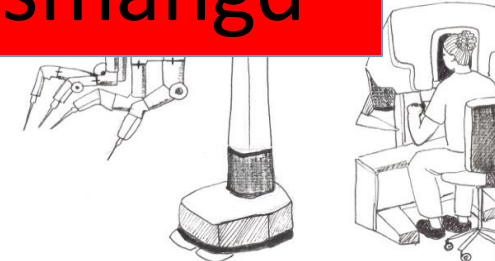
Mindre
blödningsmängd

Received: 16 November 2020 | Revised: 25 March 2021 | Accepted: 12 April 2021
DOI: 10.1111/aogs.14166

ORIGINAL RESEARCH ARTICLE

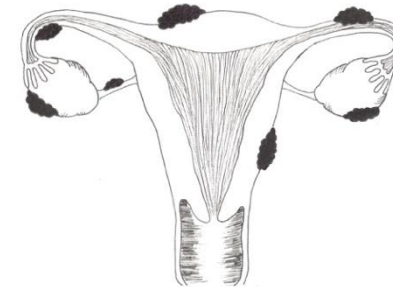
Assessment of surgeon and hospital volume for robot-assisted and laparoscopic benign hysterectomy in Sweden

Malin Brunes^{1,2} | Catharina Forsgren^{3,4} | Anna Wernqvist⁵ | Marion Ek^{1,2} |
Ulrika Johannesson^{3,4}



European
Journal of
Gynecology and
Reproductive
Medicine

Färre
konverteringar
till öppen
bukkirurgi



Peri- and postoperative outcomes in patients undergoing hysterectomy

Malin Brunes^{a,b,*}, Ulrika Johannesson^{c,d}, Henrike Habel^e, Catharina Forsgren^{c,d},
Gaby Moawad^f, Marion Ek^{a,b}



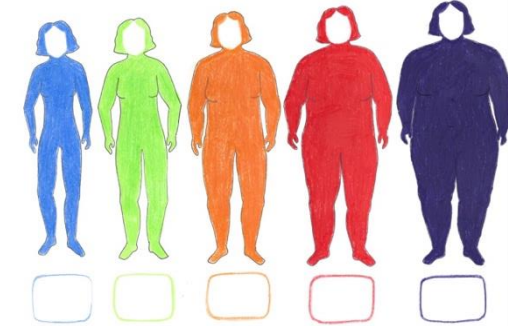
Komplikationer

RH↓jfr m AH
och VH



Outcomes in Patients
Hysterectomy

Häbel, PhD,
D, PhD



Received: 16 November 2020 | Revised: 25 March 2021 | Accepted: 12 April 2021

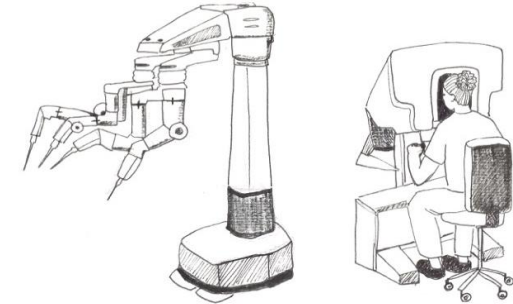
DOI: 10.1111/aogs.14166

RH↓jfr m LH



Volume for robot-assisted
and laparoscopic benign hysterectomy in Sweden

Malin Brunes^{1,2} | Catharina Forsgren^{3,4} | Anna Warnqvist⁵ | Marion Ek^{1,2} |
Ulrika Johannesson^{3,4}



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Biology

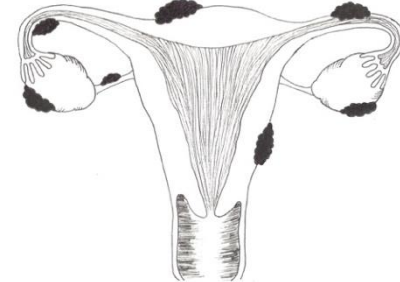
RH↓jfr m AH

n-journal-of-obstetrics-and-gynecology-and-
biology

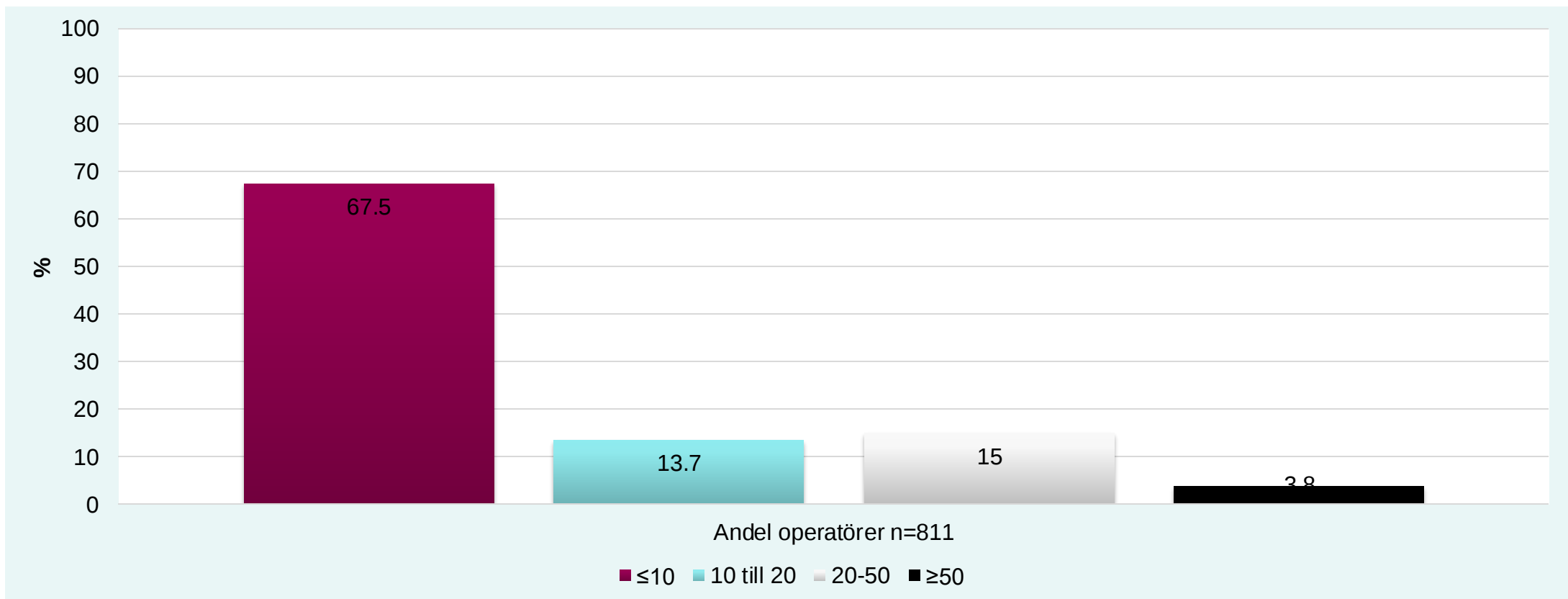


Peri- and postoperative outcomes in patients with endometriosis
undergoing hysterectomy

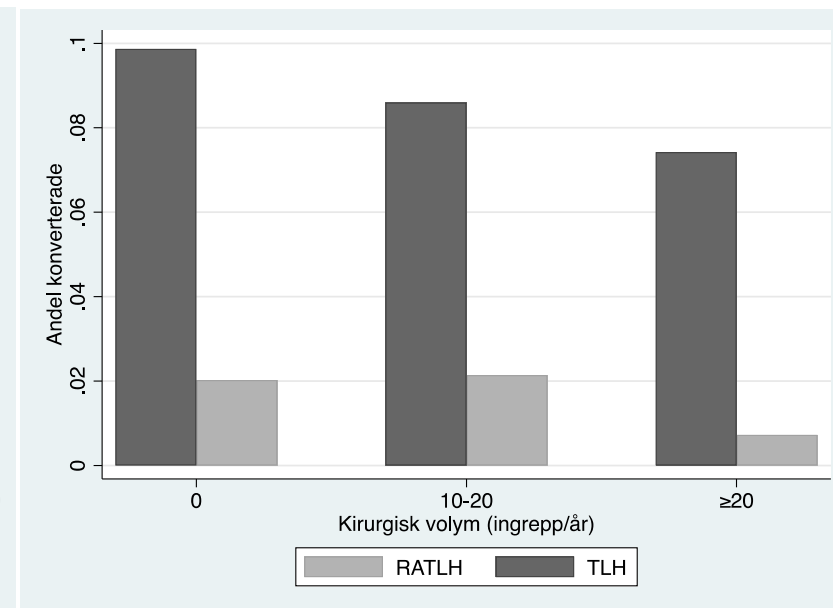
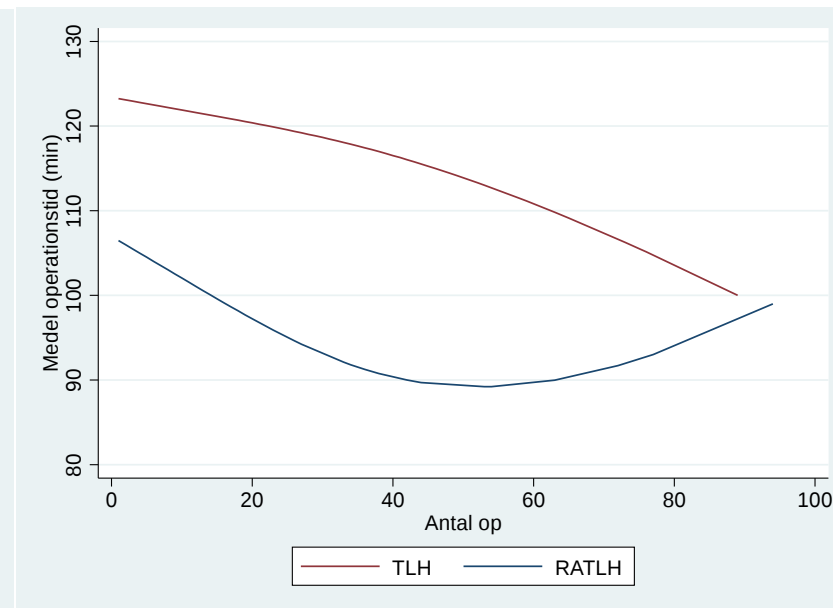
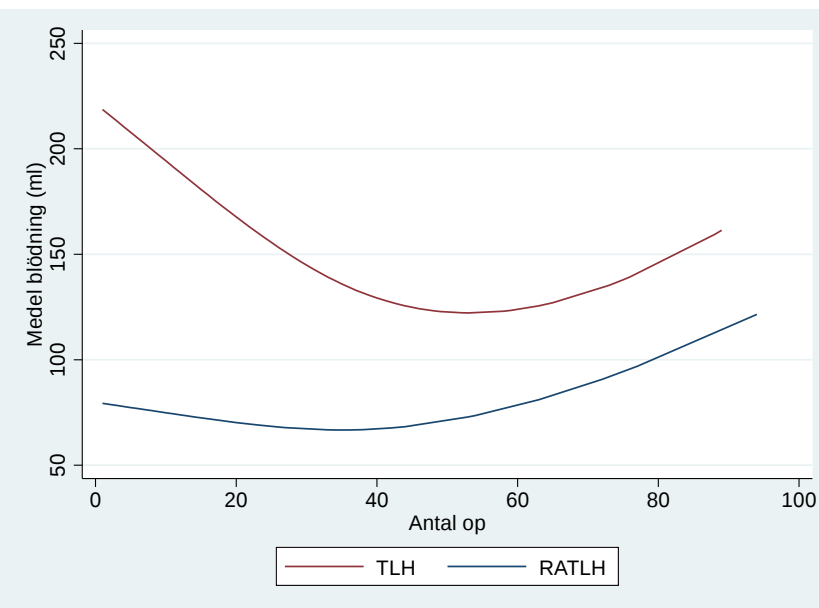
Malin Brunes^{a,b,*}, Ulrika Johannesson^{c,d}, Henrike Häbel^e, Catharina Forsgren^{c,d},
Gaby Moawad^f, Marion Ek^{a,b}



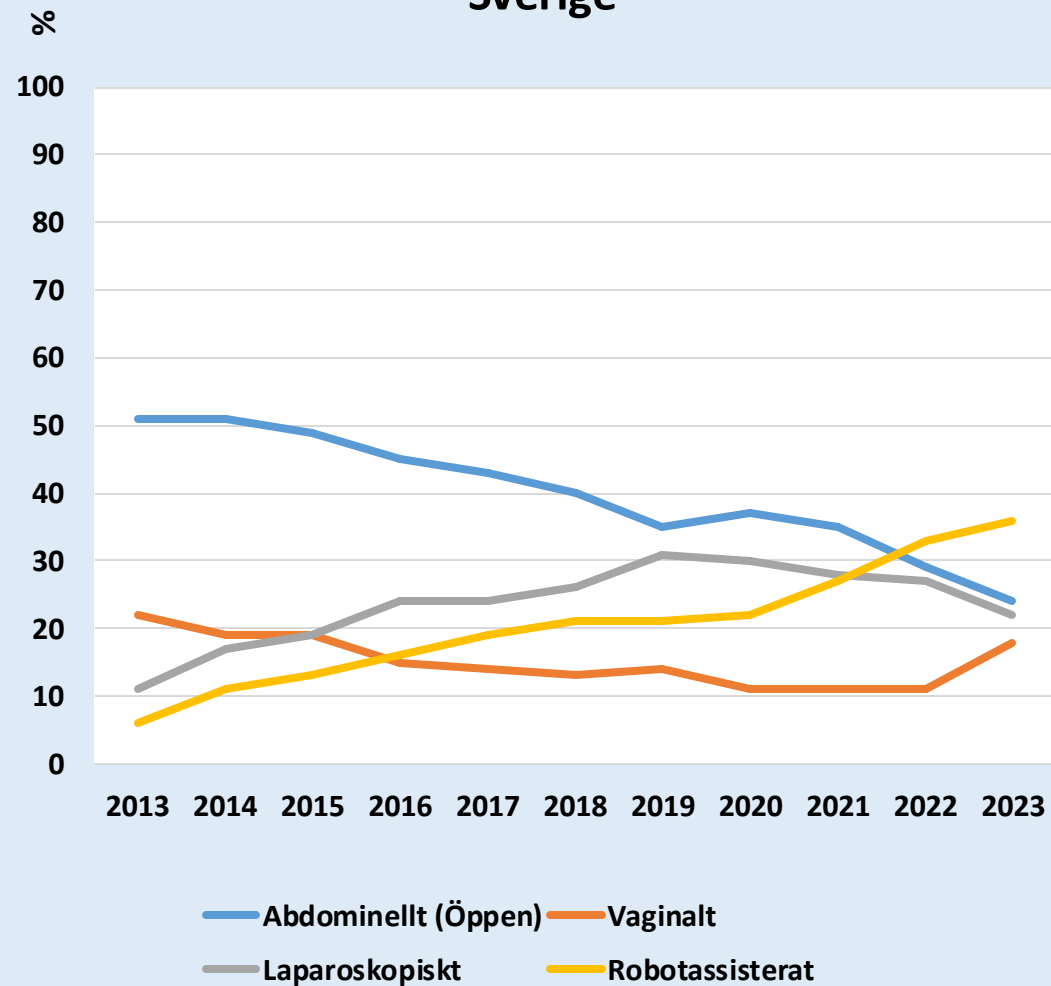
Operatörsvolym under studieperioden (3år) dvs hur många operatörer i Sverige med en viss volym hyst



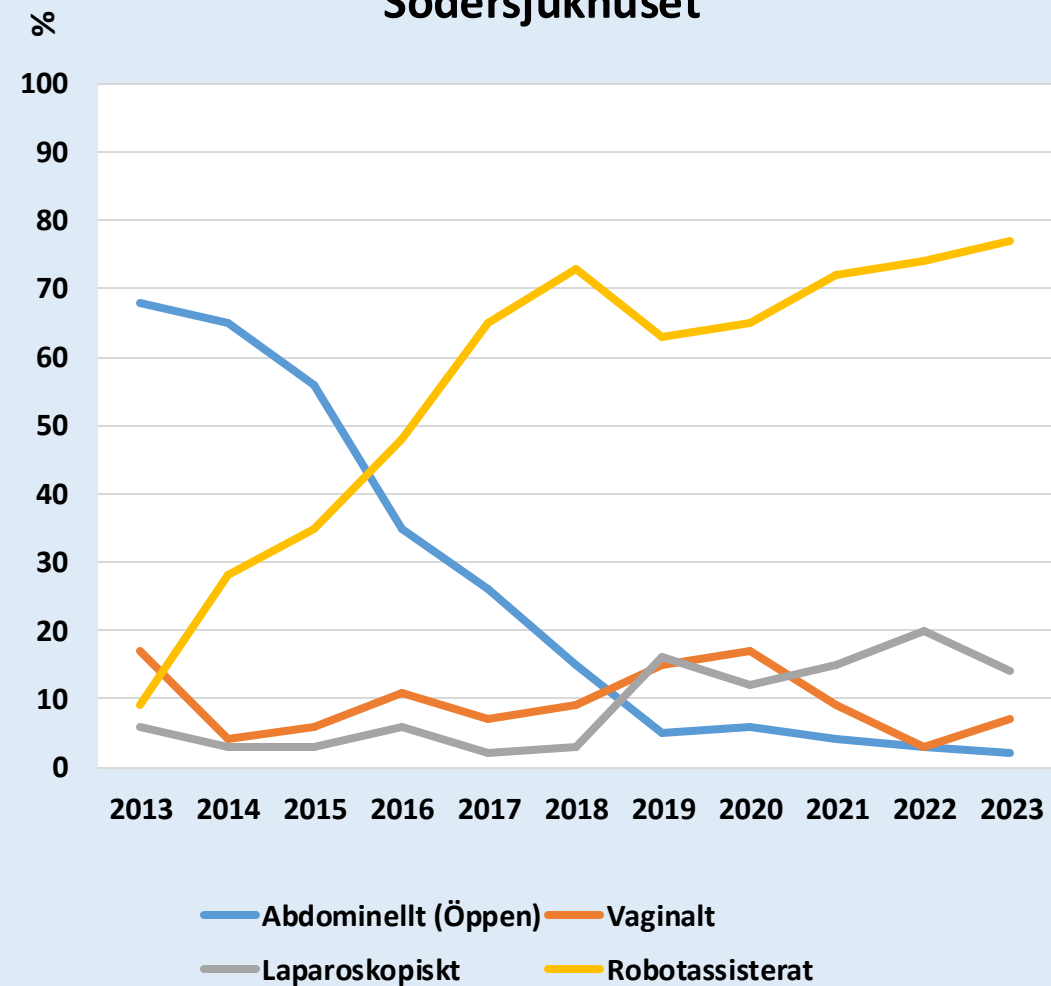
Blödning, operationstid och konvertering – RATLH vs TLH uppdelat efter kirurgisk volym



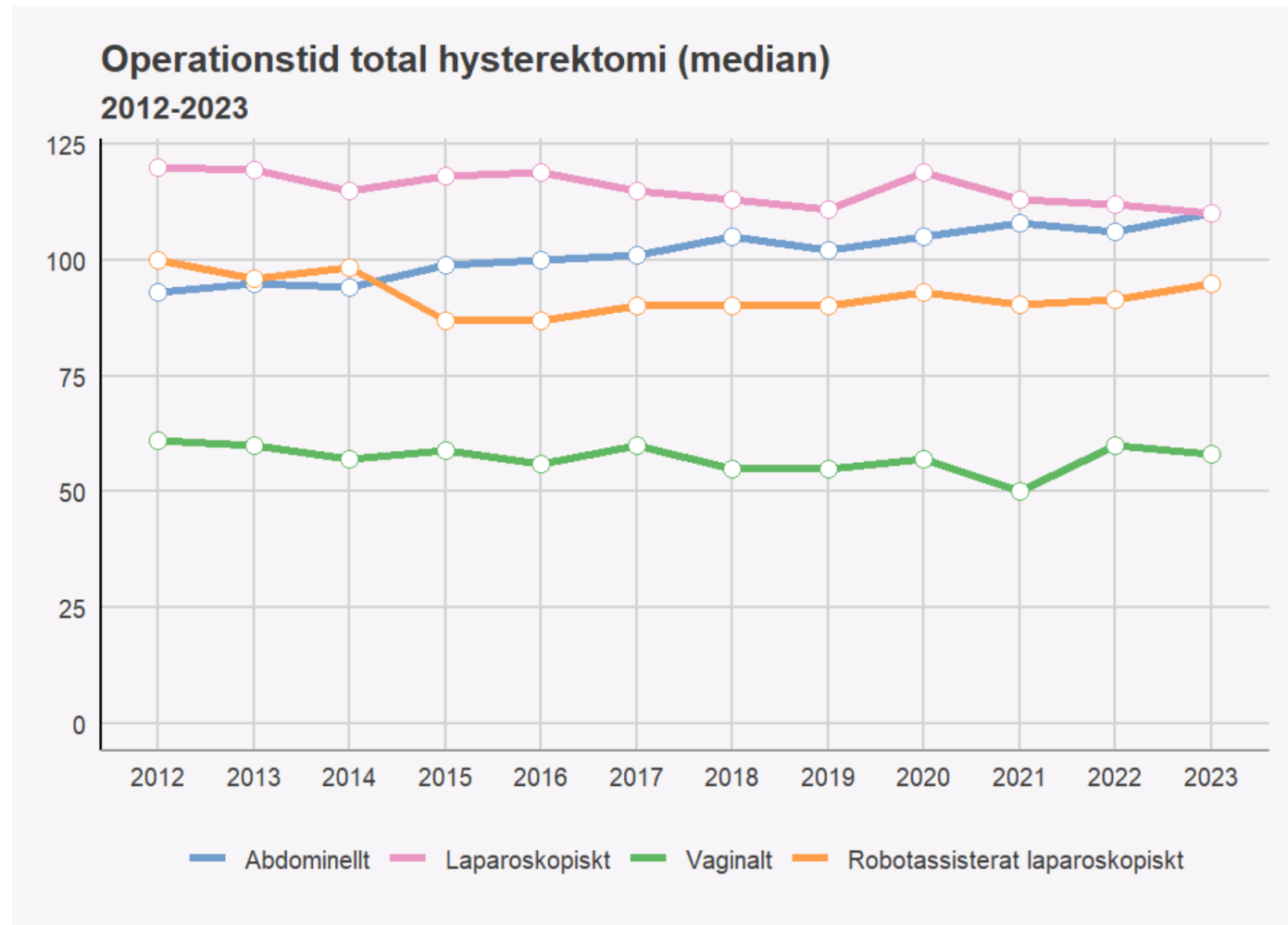
Livmoderoperationer operationsmetod Sverige



Livmoderoperation operationsmetod Södersjukhuset

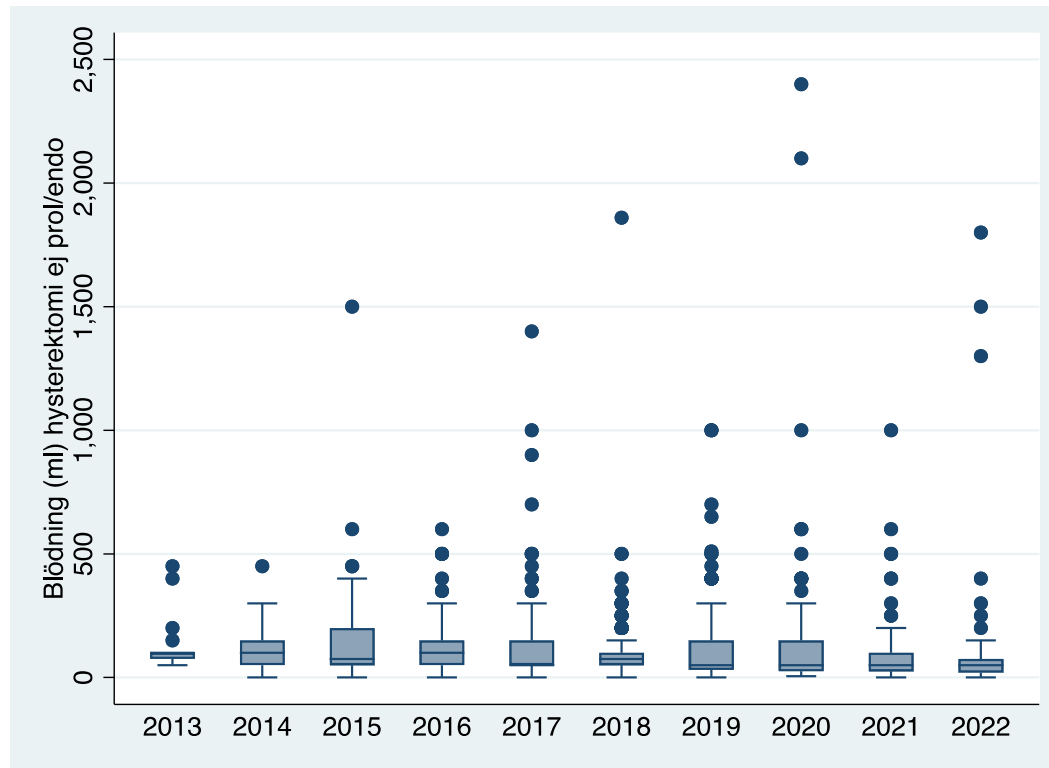


Operationstid - hysterektomi

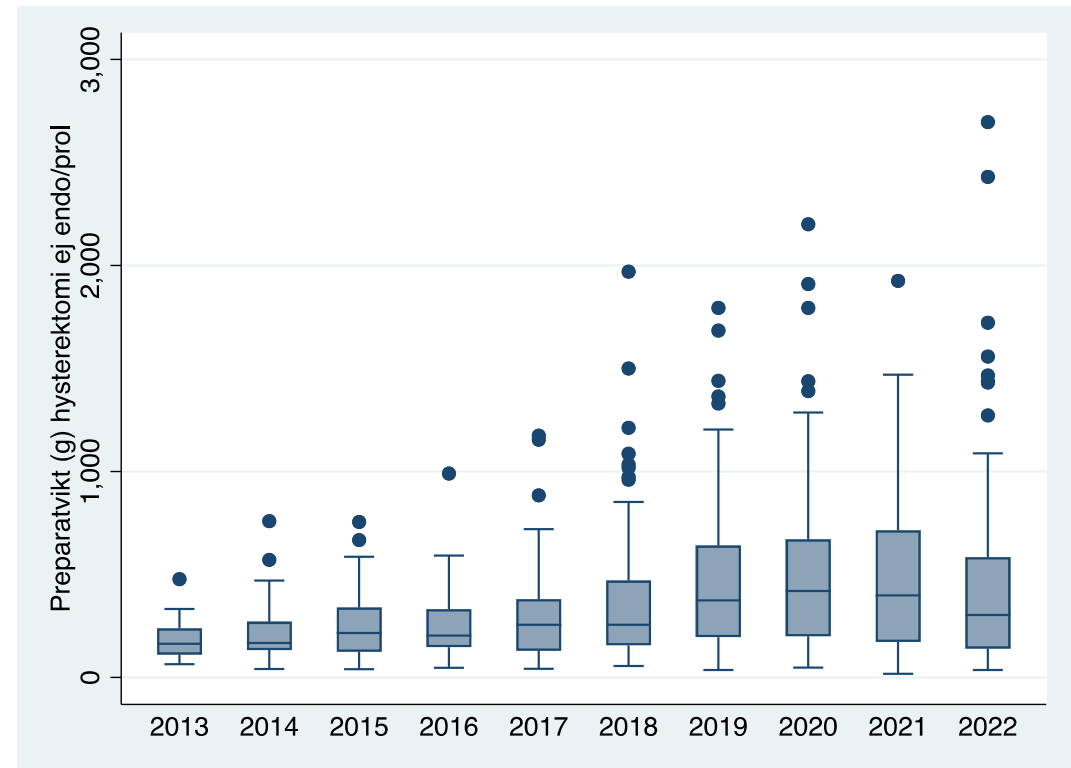


Livmoderoperation Södersjukhuset

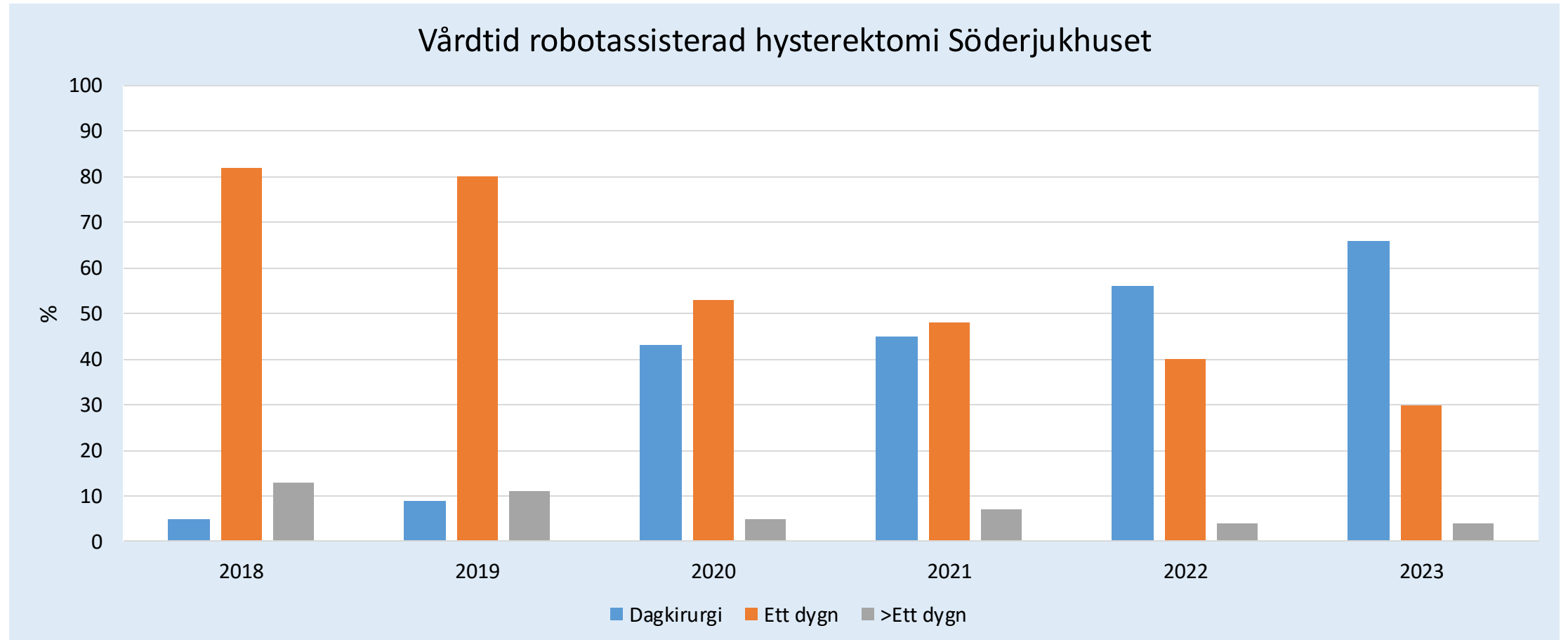
Blödning



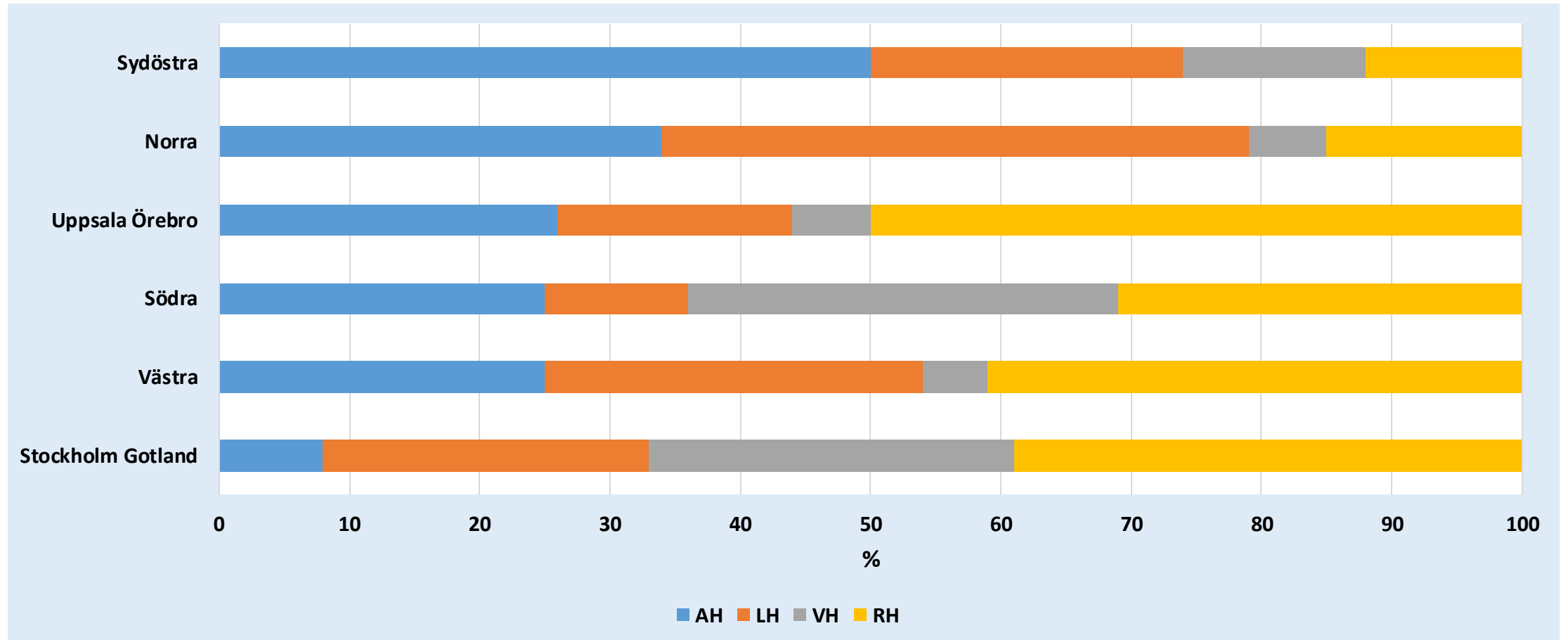
Storlek på livmoder vid operationen



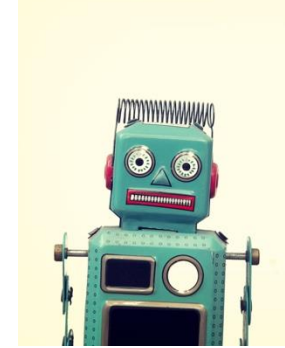
RH SÖS – Vårdtid



Operationsmetod/Sjukvårdsregion i Sverige 2023



Sammanfattning pro robot



Robotkirurgi **säkert**

Allt går att operera – du behöver inte byta metod

Ergonomin bra för operatör

Inlärningskurva snabbare jfr med tex laparoskopi

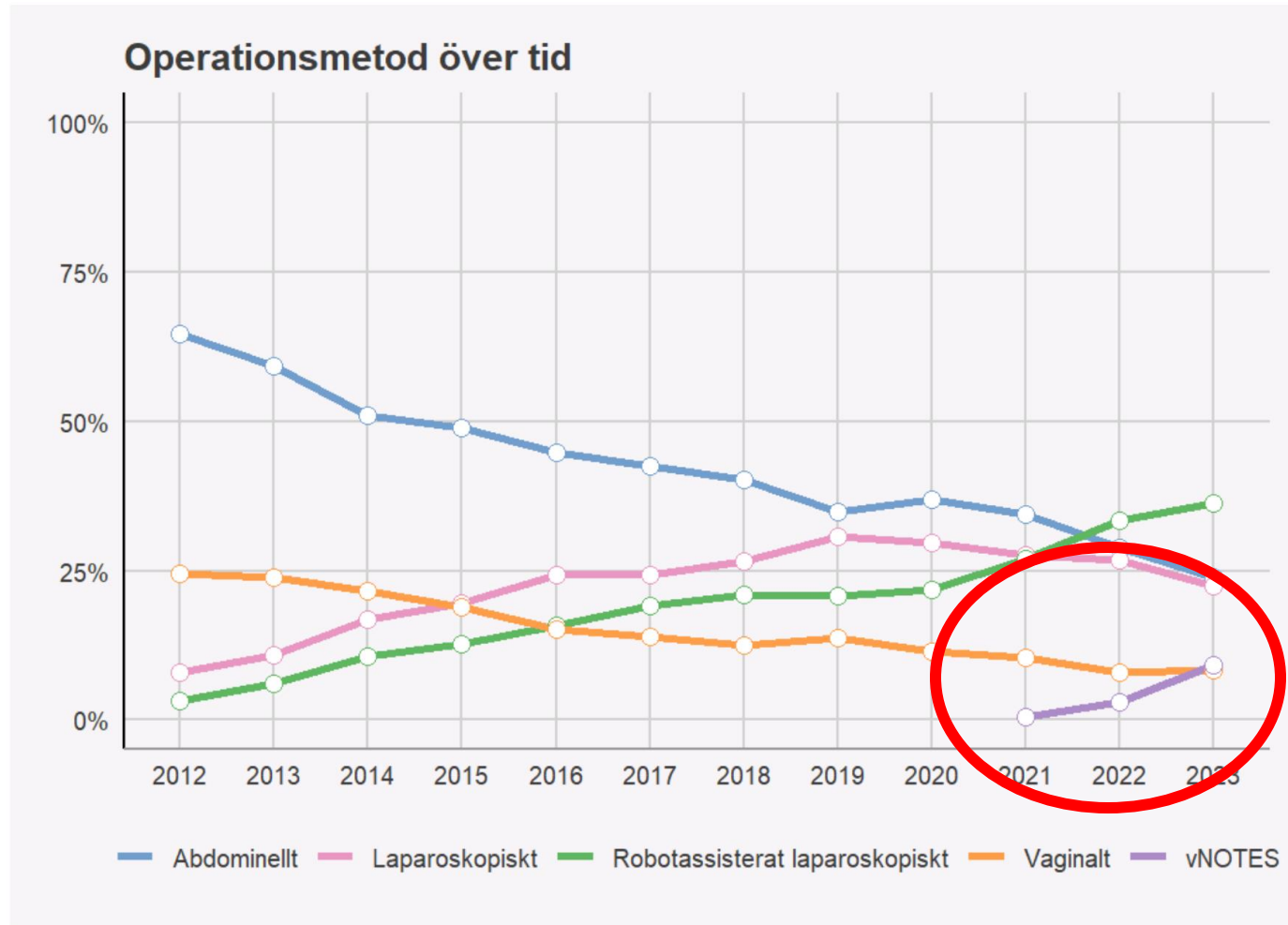
Sverige:

Låga operatörsvolymer

Robot ger bättre perioperativt utfall jfr med andra MIS hysterektomimetoder vid komplex kirurgi och låg operatörsvolym



Sverige 2023 - Gynop



Tack

