Postpartum Salpingectomy for Permanent Contraception and Cancer Risk Reduction

PNW Update in Ob/Gyn and Women's Health

DATE: November 14, 2019

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Disclosures

- None

Objectives

- Review methods of permanent contraception and fallopian tube etiology of ovarian cancer
- Understand current recommendations and practice patterns
- Discuss literature regarding safety, feasibility, and cost-effectiveness of postpartum salpingectomy

Pop Quiz! True or False

- A salpingectomy is the removal of the mid-section of the fallopian tube.
- Salpingectomy should be discussed with all women undergoing a tubal ligation.

Female Permanent Contraception

- 2nd most common US contraceptive method
- Surgical technique
  - Variable
  - Hysteroscopic – no longer available
- Timing
  - Interval
  - Postpartum

- **High mortality**
- **No effective screening**
- **70% Tubal origin?**

Prophylactic or Opportunistic Salpingectomy

2013 2015 2019

Society of Gynecologic Oncologists (SGO):

Consider salpingectomy at time of hysterectomy or other pelvic surgery to reduce ovarian cancer risk.

2013 2015 2019

ACOG COMMITTEE OPINION

Number 774

(Replaces Committee Opinion Number 620, January 2015)

Committee on Gynecologic Practice

This Committee Opinion was developed by the American College of Obstetricians and Gynecologists' Committee on Gynecologic Practice in collaboration with committee member Lubna Chohan, MD, and committee liaison Debra L. Richardson, MD.

Opportunistic Salpingectomy as a Strategy for Epithelial Ovarian Cancer Prevention

2013

Society of Gynecologic Oncologists (SGO):

Consider salpingectomy at time of hysterectomy or other pelvic surgery to reduce ovarian cancer risk.

2015

American College of Obstetricians and Gynecologists (ACOG):

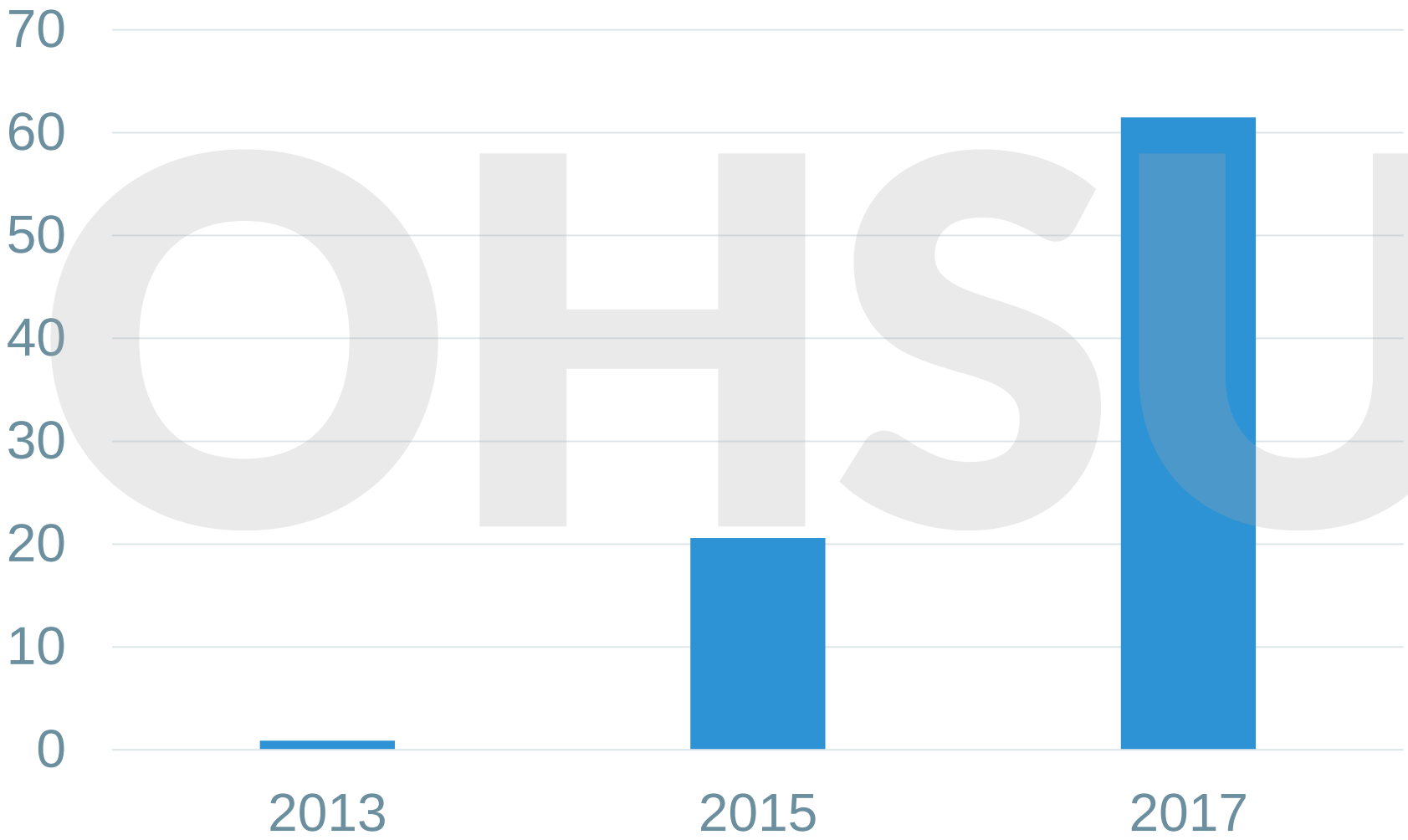
"Although data are limited, postpartum salpingectomy and salpingectomy at the time of cesarean delivery appear **feasible and safe**."

"The risks and benefits of salpingectomy should be discussed with patients who desire permanent sterilization."

Technique: remove fimbriated ends and any fimbrial attachments to the ovary.

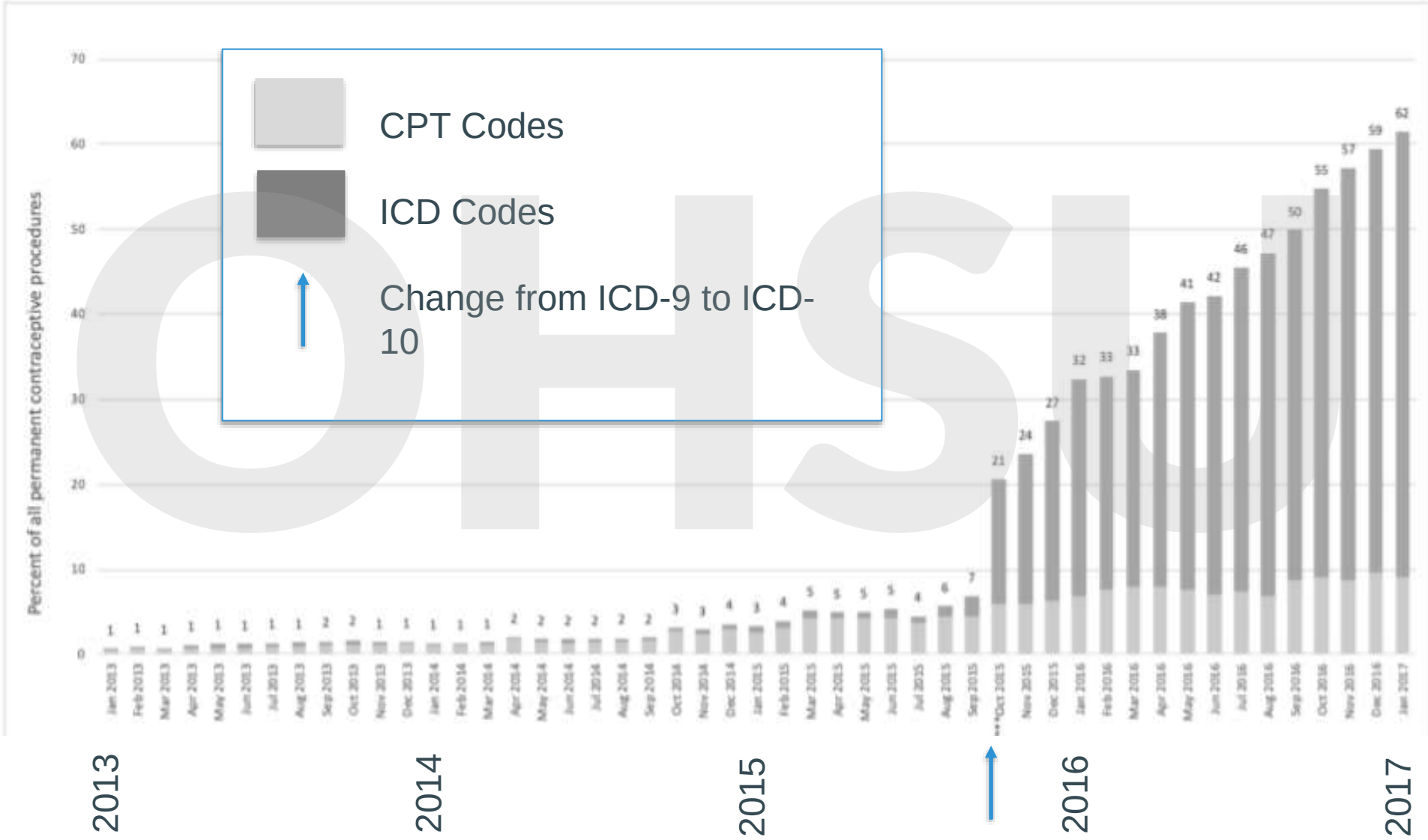
2019

Salpingectomy Rates Pre/Post ACOG Guidelines



Polen-De et al. Contraception. 2019.

Salpingectomy Rates by CPT and ICD Codes



Polen-De et al. Contraception. 2019.

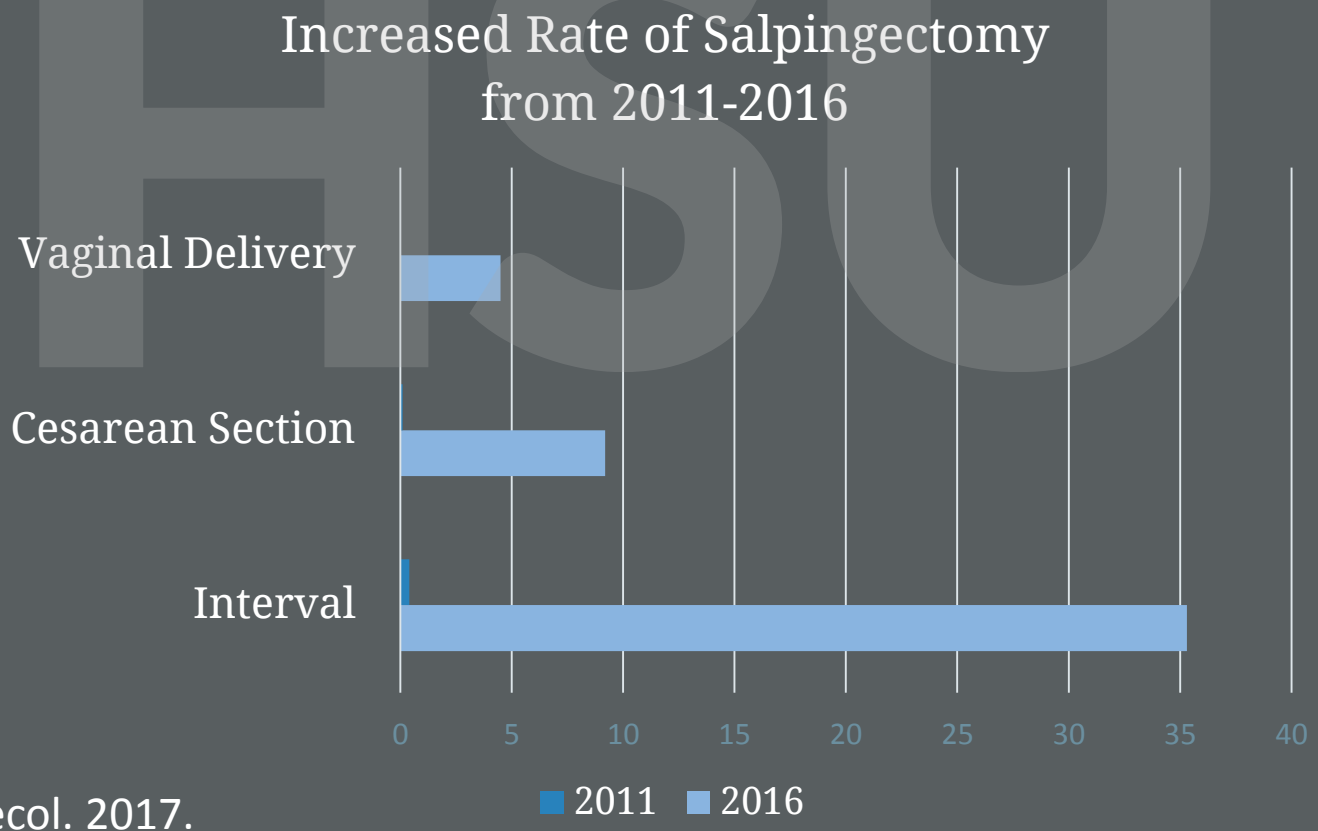
Original Research

Salpingectomy for Sterilization

Change in Practice in a Large Integrated Health Care System, 2011–2016

C. Bethan Powell, MD, Amy Alabaster, MPH, Sarah Simmons, MD, Christine Garcia, MD, MPH, Maria Martin, MD, Sally McBride-Allen, BS, and Ramey D. Littell, MD

- Northern California Kaiser Database including >10,000 procedures



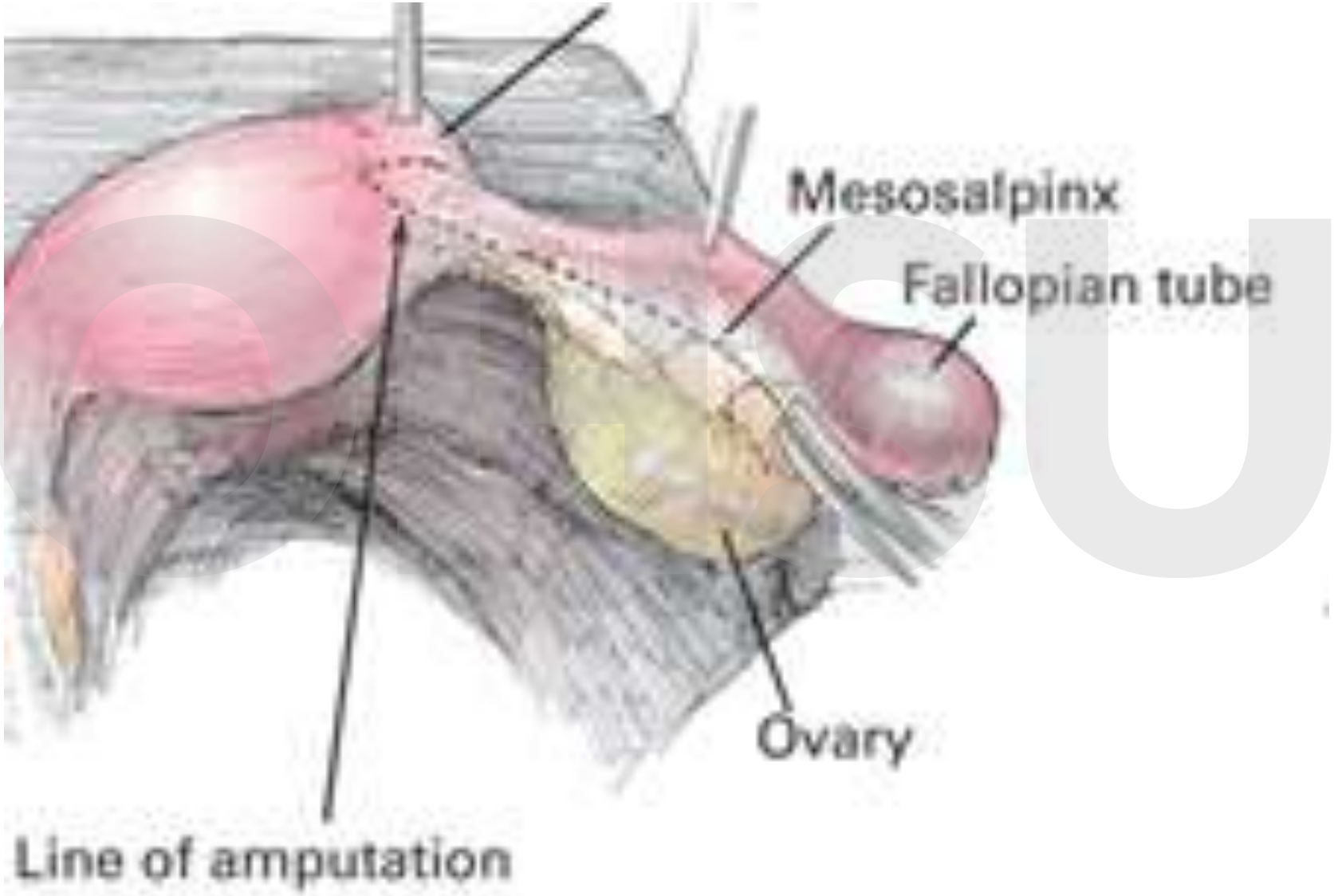
Powell et al. Obstet Gynecol. 2017.

Is it feasible?

- Randomized control trial
- Population:
  - Women undergoing C-section
    - Standard BTL: Partial salpingectomy
    - Complete bilateral salpingectomy
- Primary Outcome
  - Mean total operative time
  - Completion rate

Subramaniam A et al. Obstet Gynecol. 2018.

Salpingectomy Technique



Primary Outcomes:

- Mean total operative time: salpingectomy 15 min longer
- Completion: salpingectomy less successful 68% vs 95%

Secondary Outcomes:

- Mean tubal operative time: salpingectomy 12 min longer
- Median EBL for tubal procedure: higher in salpingectomy group 10cc [5-25] vs. 5cc [5-10]
- No adverse outcomes in either group

	BTL	Salpingectomy
Delivery BMI	39.4 +/- 7.4	38.8 +/- 10.0
H/o abdominal or pelvic surgery	5%	8%
# of prior cesareans	2.0 +/- 1.0	2.0 +/- 0.8
Cesarean type		
Primary	18%	3%
Repeat	83%	98%
Skin incision		
Vertical	8%	18%
Pfannenstiel	93%	83%

Of those where salpingectomy was assigned, but not completed:

- Higher BMI (46 vs 36)
- Longer time from skin to tubal start (18 minutes)

Surgeon Satisfaction & Attitudes

	BTL	Salpingectomy
Satisfied with feasibility	92%	62%
Satisfied with safety	97%	53%

Conclusions

- 15 minutes extra operative time
- Safe
- 2/3rds successful completion

- Similar findings in other studies

If we think salpingectomy is a safe and feasible alternative…

- Do the benefits outweigh the risks?
- Is it cost effective?

- Theoretic cohort of women undergoing cesarean delivery who desired permanent contraception
  - Bilateral tubal ligation
  - Bilateral opportunistic salpingectomy
  - Postpartum LARC (baseline reference group)

- Examined clinical outcomes and cost-effectiveness

Venkatesh KK et al. Am J Obstet Gynecol. 2019.

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Assumptions

Operative complications:

- Absolute baseline risk 6.9%
  - BTL: + 10 minutes = 7.6%
  - Salpingectomy: + 20 minutes = 8.3%

Pregnancy outcomes (unintended / ectopic):

- BTL: 0.45% risk pregnancy / 20% ectopic
- Salpingectomy: 0.38% risk pregnancy / 10% ectopic

Ovarian cancer:

- Absolute baseline risk 1.28%
  - BTL: 34% risk reduction
  - Salpingectomy: 64% risk reduction

TABLE 2

Clinical outcomes in study population of pregnant women seeking permanent sterilization at time of cesarean delivery

Strategy	No. of ovarian cancer cases	No. of ovarian cancer deaths over 10 y	No. of surgery complications	No. of intrauterine pregnancies	No. of ectopic pregnancies
Cesarean delivery with salpingectomy	507	302	9130	376	42
Cesarean delivery with tubal ligation	929	554	8360	396	99
Cesarean delivery with LARC	1051	625	7700	517	583

Assuming study population of 110,000 pregnant women desiring permanent sterilization at time of cesarean delivery.

LARC, long-acting reversible contraception.

Venkatesh et al. Cost-effectiveness of salpingectomy vs tubal ligation at cesarean. Am J Obstet Gynecol 2019.

Cost Effectiveness

- BTL procedure is cost-saving $64
- Both BTL and salpingectomy have favorable cost effectiveness ratios.
- Salpingectomy is more cost effective for outcomes of contraception and ovarian cancer risk reduction.

Is there a preferred strategy?

- 49% chance that BTL is the preferred strategy

- If salpingectomy complication risk is > 2% higher than BTL

OR

- If cancer risk reduction of salpingectomy is <52%

THEN

- Bilateral tubal ligation is the preferred strategy.

Conclusions

- BTL and Salpingectomy are both cost-effective strategies for permanent contraception and ovarian cancer risk reduction.

- Risks and benefits of salpingectomy with cesarean delivery need to be better defined before a preferred strategy can be determined.

Summary

- No evidence of short-term (peri-operative) risk or long-term risk with salpingectomy.
- Salpingectomy appears to be safe and feasible at time of cesarean section, though operative time may be increased.
- Limited data exists regarding salpingectomy the time of post-partum tubal (after vaginal delivery).
- Benefits include contraceptive efficacy and ovarian cancer risk reduction.
- Appears to be cost-effective
- Some questions still remain…

Considering postpartum salpingectomy in your practice?

- Discuss options during prenatal care
  - Benefits of BTL and salpingectomy: contraception and ovarian cancer risk
  - Risks: increased operative time, regret, inability to complete procedure
- Consider patient specific risks/surgical difficulty
- Develop a standardized technique and consider implementing a training plan
- Choose method based on intraoperative findings

Questions?

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  - Center of Experience in Deep Implant Removals

CPT Codes:

- **At time of cesarean section:**
  - **58611**: ligation or transection of fallopian tube(s) done at the time of cesarean delivery or intra-abdominal surgery.
  - **58700:** Salpingectomy, complete or partial, unilateral or bilateral (separate procedure)
- **At time of laparoscopy:**
  - **58670:** laparoscopy surgical; with fulguration of oviducts (With or without transection). This was developed specifically for reporting a laparoscopic elective sterilization.
  - **58661:** laparoscopy surgical with removal of adnexal structures. This should be used when a disease process is involved (adnexal mass, paratubal cyst, etc).

Should we be routinely performing salpingectomy during cesarean deliveries?

"Ultimately, the value of salpingectomy requires more study to accurately balance the risks including complications, cost, surgical time, lack of reversibility, and potential effect on ovarian reserve against the benefits, including a higher rate of sterilization, lower reoperation rates, and, most importantly, the comparative reduction in ovarian cancer offered by salpingectomy over tubal occlusion."

Powell et al. Obstet Gynecol. 2017.

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Questions?
Contact me

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