

# A FELLOW'S EXPERIENCE OF OVARIAN CANCER SURGERY AT THE PAN-BIRMINGHAM GYNAECOLOGICAL CANCER CENTRE: 5 OBSERVATIONS FROM MY LAST 2 YEARS

---

Andrew Phillips

Feb 2016

# The Pan-Birmingham Gynaecological Cancer Centre

- Tertiary level care for 6 cancer units across Birmingham.
- Supra-regional referrals for exenterative surgery, advanced laparoscopic procedures, secondary debulking and vulval surgery.
- 6 consultant gynaecological oncologists
- 2 subspecialty trainees in gynaecological oncology
- 480 major cancer operations/year
- Approximately 100 Stage 3/4 ovarian cancers/year

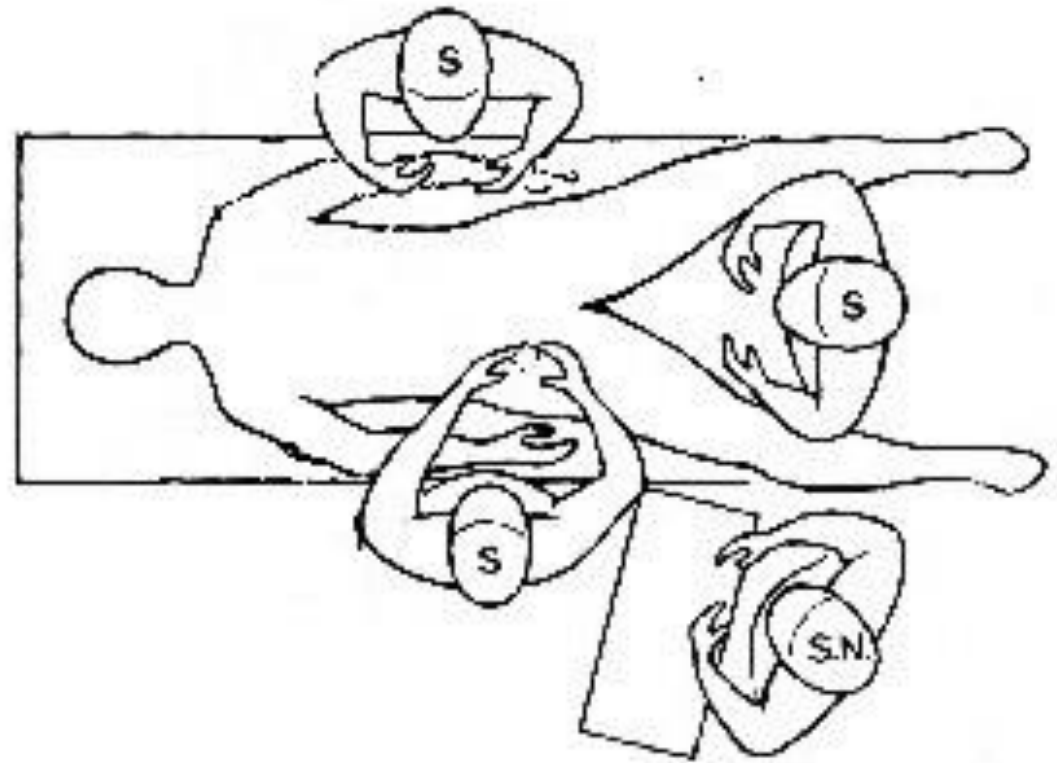


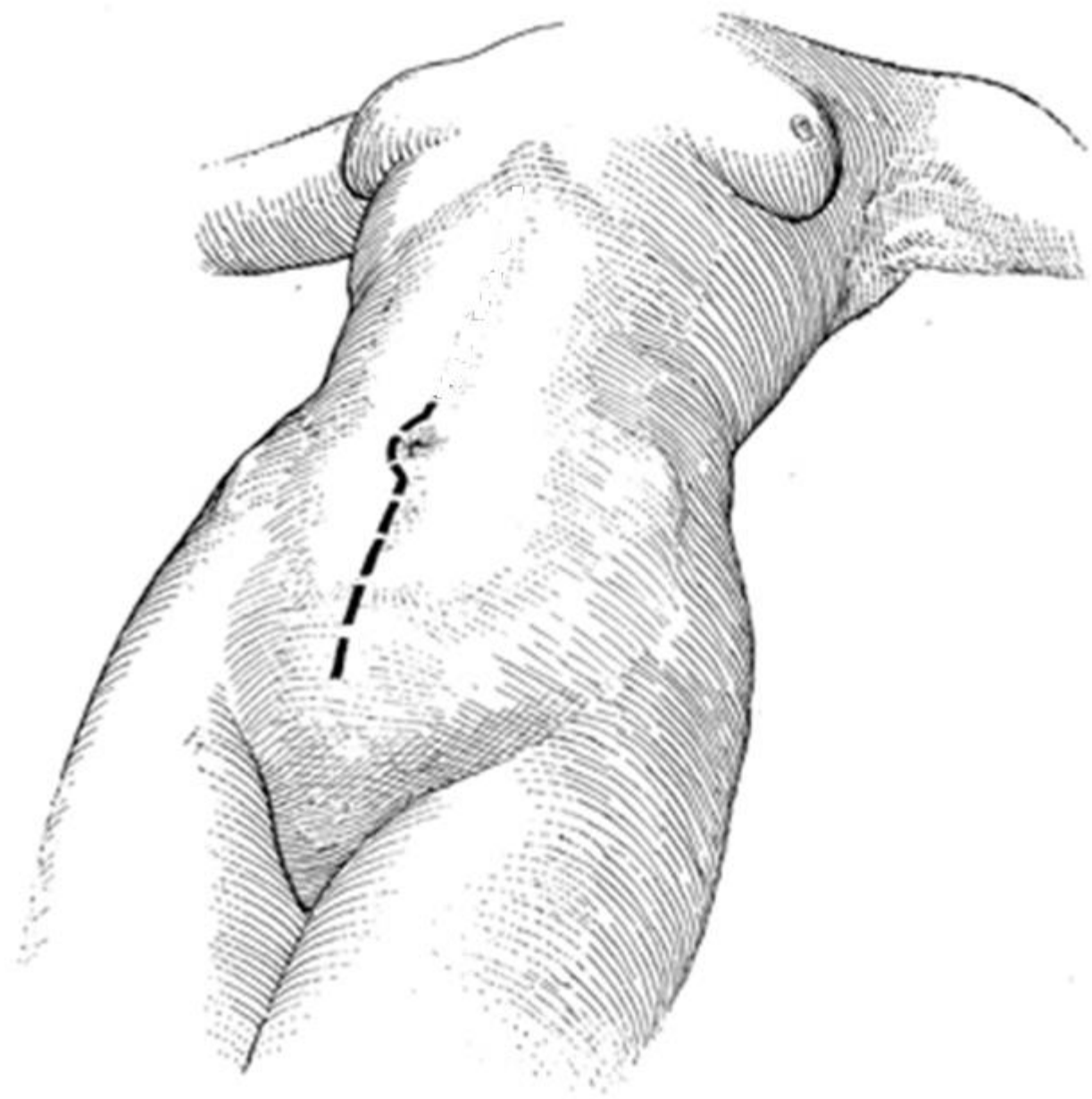
“POOR ARE THOSE THAT HAVE  
EYES BUT CANNOT SEE”

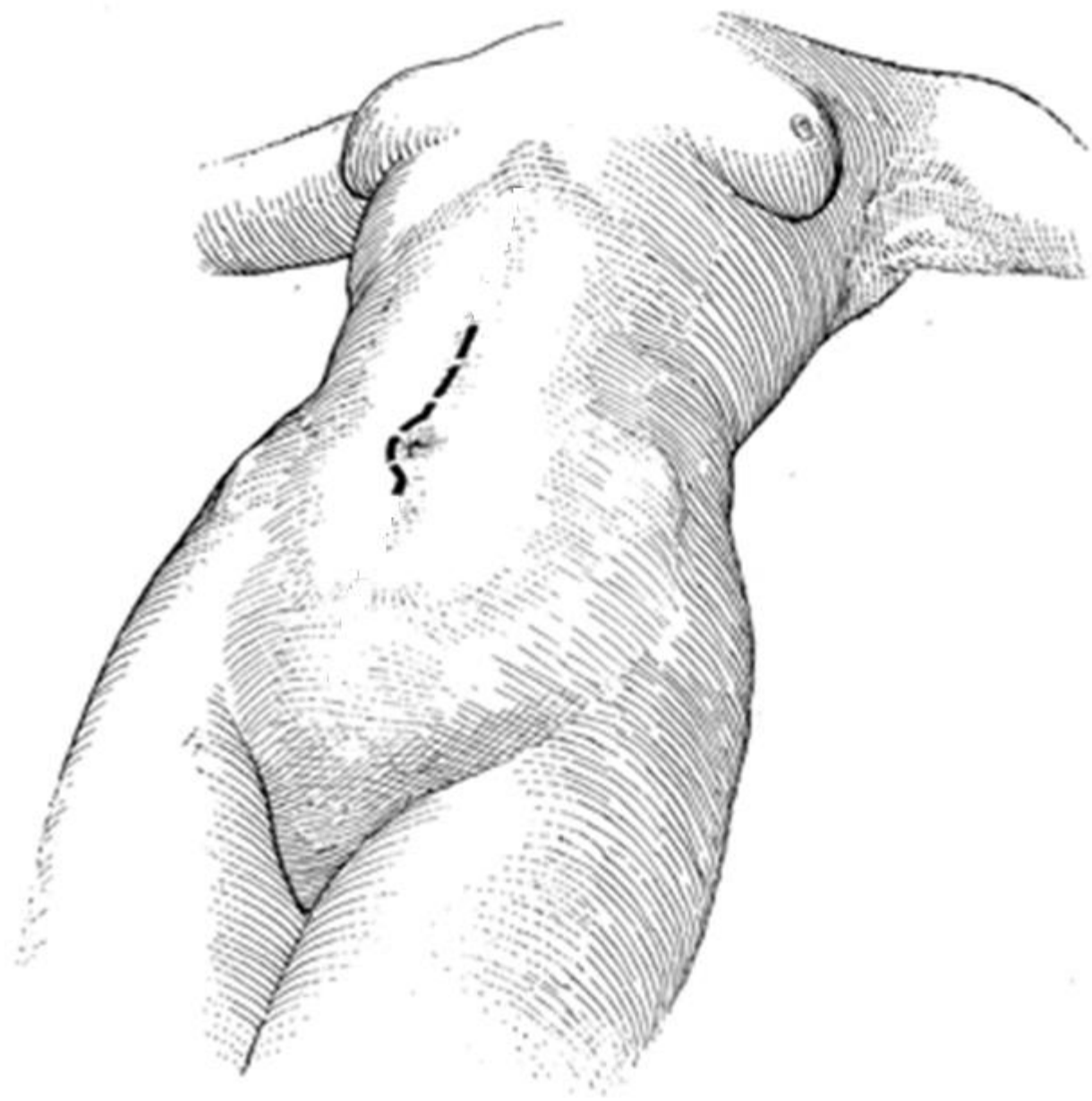
---

# Basic Principles

- Lloyd-Davis position
- PR/PV and speculum examination
- Catheter and prep
- Suitable retractor
- Experienced assistants
- Sterile field
- Extra equipment available
  - Haemorrhage
  - Procedural

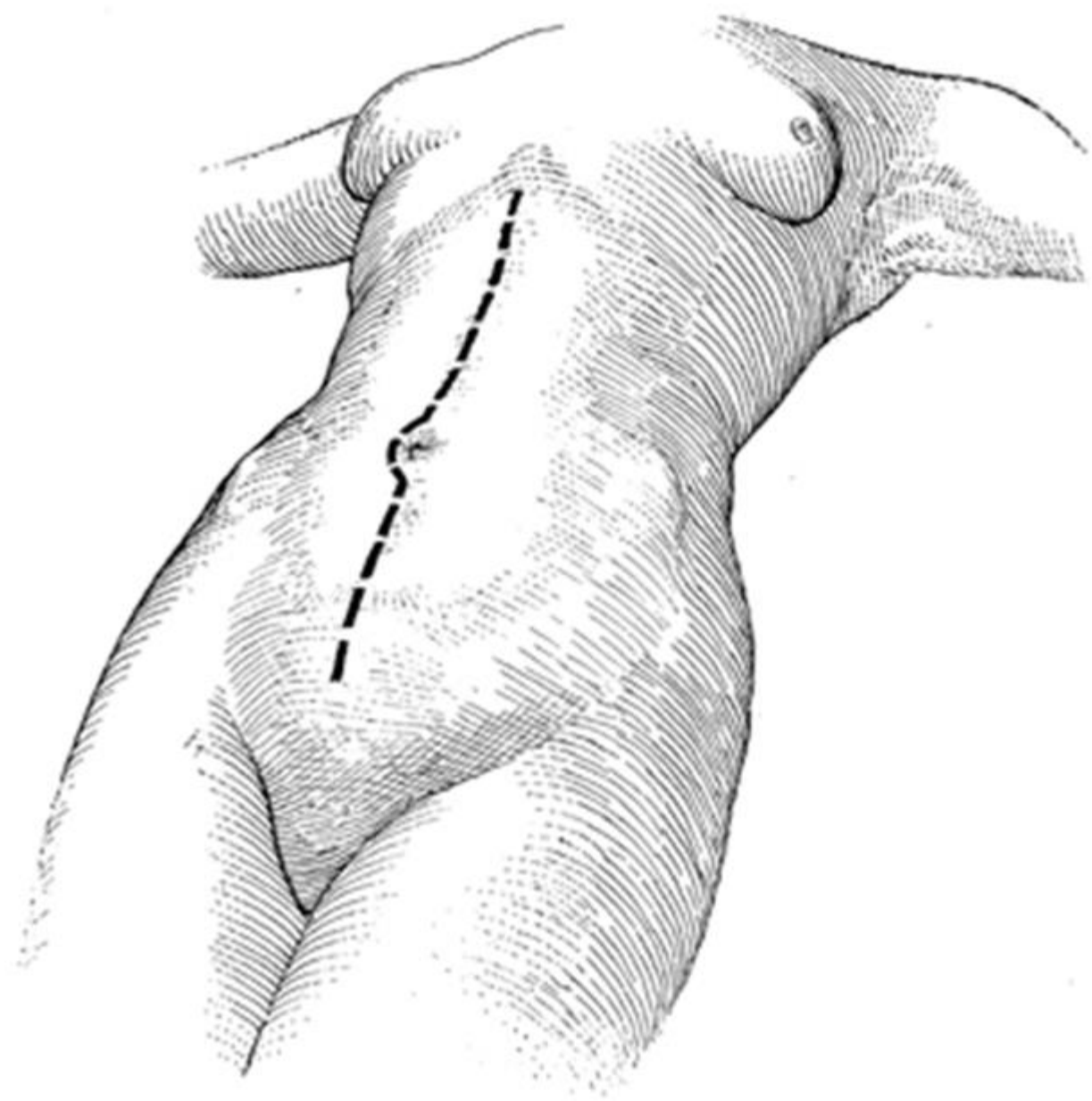






# Limited Examination

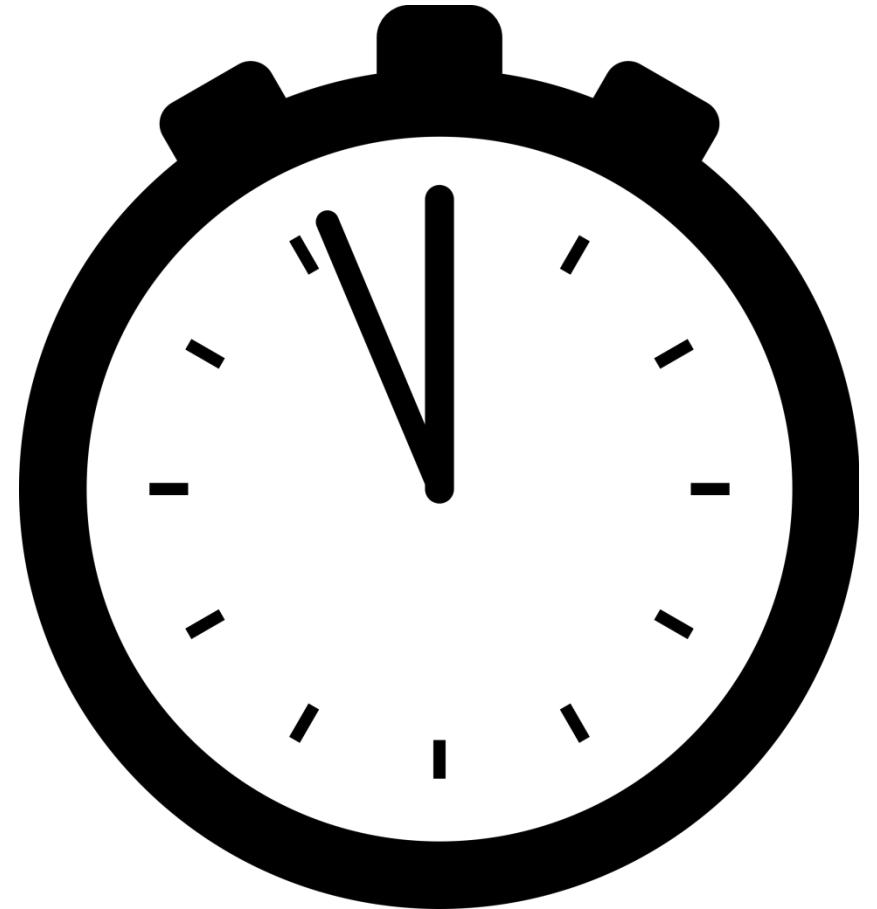
- Small bowel serosal/mesenteric disease
- Porta hepatic disease
- Disease that your team cannot resect
- Disease too extensive for the patient to receive treatment

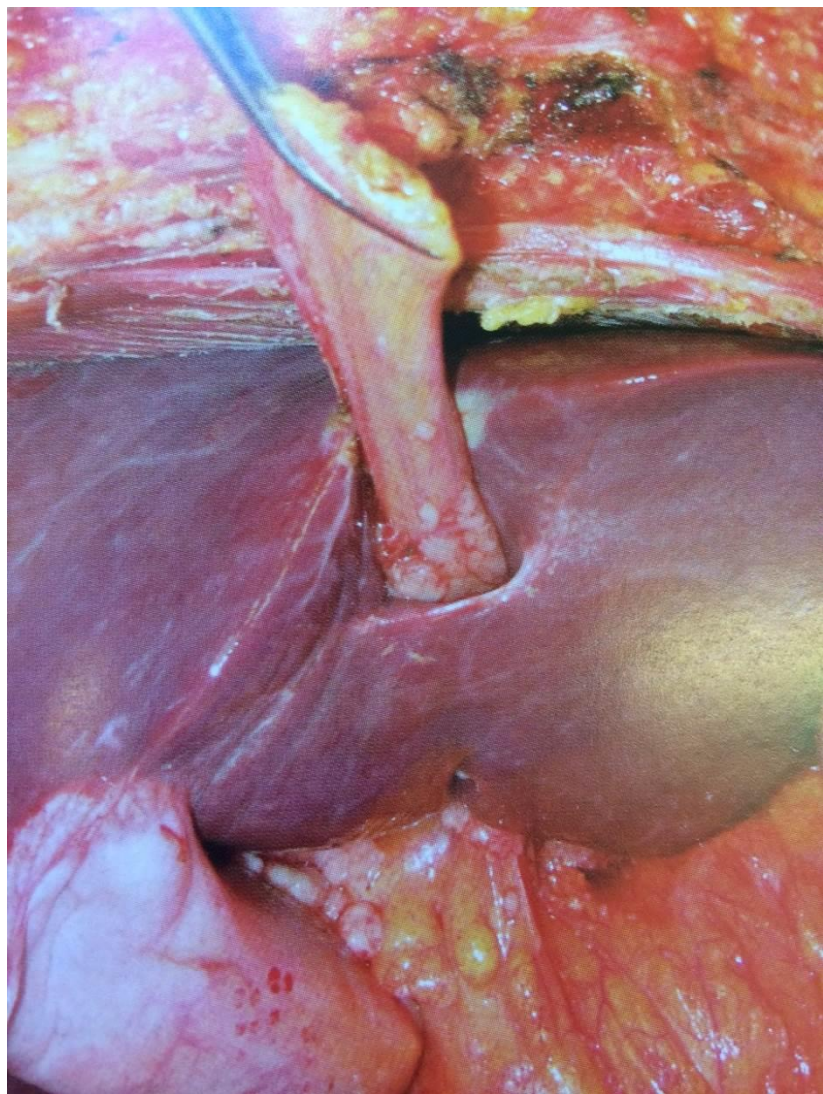




# Identify Points of Restriction

- Investigate and divide adhesions
- Visualise both diaphragms, and hepato-renal recesses
- Consider dividing the round ligament of liver
- Open the lesser sac and formally assess the porta hepatis
- Carefully inspect the spleen
- Walk the small bowel starting from the appendicular recesses with both palpation and visual review of mesenteric surfaces
- Palpate the full para-aortic region
- Large bowel and pelvis





# Identify Points of Restriction

- Investigate and divide adhesions
- Visualise both diaphragms, and hepato-renal recesses
- Consider dividing the round ligament

**ARE YOU ABLE TO DELIVER SOME BENEFIT FOR THIS PATIENT? – THEN PROCEED**

- Open the lesser sac and formally assess the porta hepatis
- Carefully inspect the spleen
- Walk the small bowel starting from the appendicular recesses with both palpation and visual review of mesenteric surfaces
- Palpate the full para-aortic region
- Large bowel and pelvis



# Two Approaches

## EXPERT

- Where are you going to fail?
- If you have failed, can you achieve  $<1\text{cm}$
- If not – cut no further

## BEGINNER/ESTABLISHING

- Standard procedures first
- Begin “ultra radical procedures”
- If you have failed, can you achieve  $<1\text{cm}$
- If no – cut no further

# Can I trust my eyes? Or the radiology?

Suspicion of Disease	No. of spleens suspected of having disease (n)	No. of spleens with disease (n)	PPV (%)
Preoperative (CT)	18	16	88.9
Intraoperative	37	34	91.9

Suspicion of Disease	No. of diaphragms suspected of having disease (n)	No. of diaphragms with disease (n)	PPV (%)
Pre-operative (CT)	18	17	94.4
Intra-operative	43	41	95.3

“WHEN ALL YOU HAVE IS A HAMMER  
EVERYTHING LOOKS LIKE A NAIL”

---

or a Birmingham screwdriver?

# Operative Scenarios in Advanced Ovarian Cancer

- Emergency
- Primary debulking
- Delayed primary/interval debulking
- Secondary debulking
- Palliative surgery



# Emergency

- Take out the mass
- Resolve intestinal blockages
- ?Remove large volume omental cake
- Drain ascites
- Try to improve performance status for planned, elective treatment





# Primary Surgery

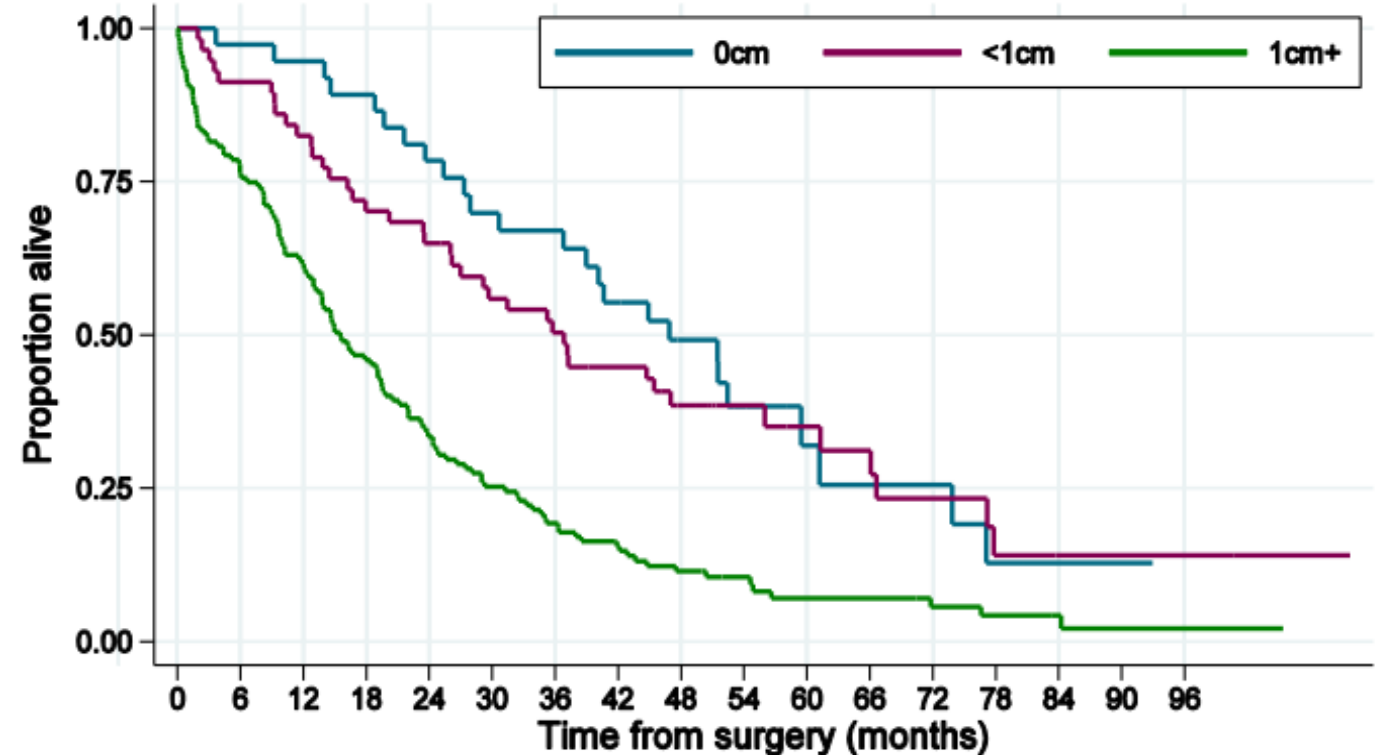
Primary chemotherapy versus primary surgery for newly diagnosed advanced ovarian cancer (CHORUS): an open-label, randomised, controlled, non-inferiority trial

*Sean Kehoe, Jane Hook, Matthew Nankivell, Gordon C Jayson, Henry Kitchener, Tito Lopes, David Luesley, Timothy Perren, Selina Bannoo, Monica Mascarenhas, Stephen Dobbs, Sharadah Essapen, Jeremy Twigg, Jonathan Herod, Glenn McCluggage, Mahesh Parmar, Ann-Marie Swart*

**MAXIMUM CYTOREDUCTIVE EFFORT – NO BENEFIT IN GOING BACK**

## Survival from surgery by debulking status

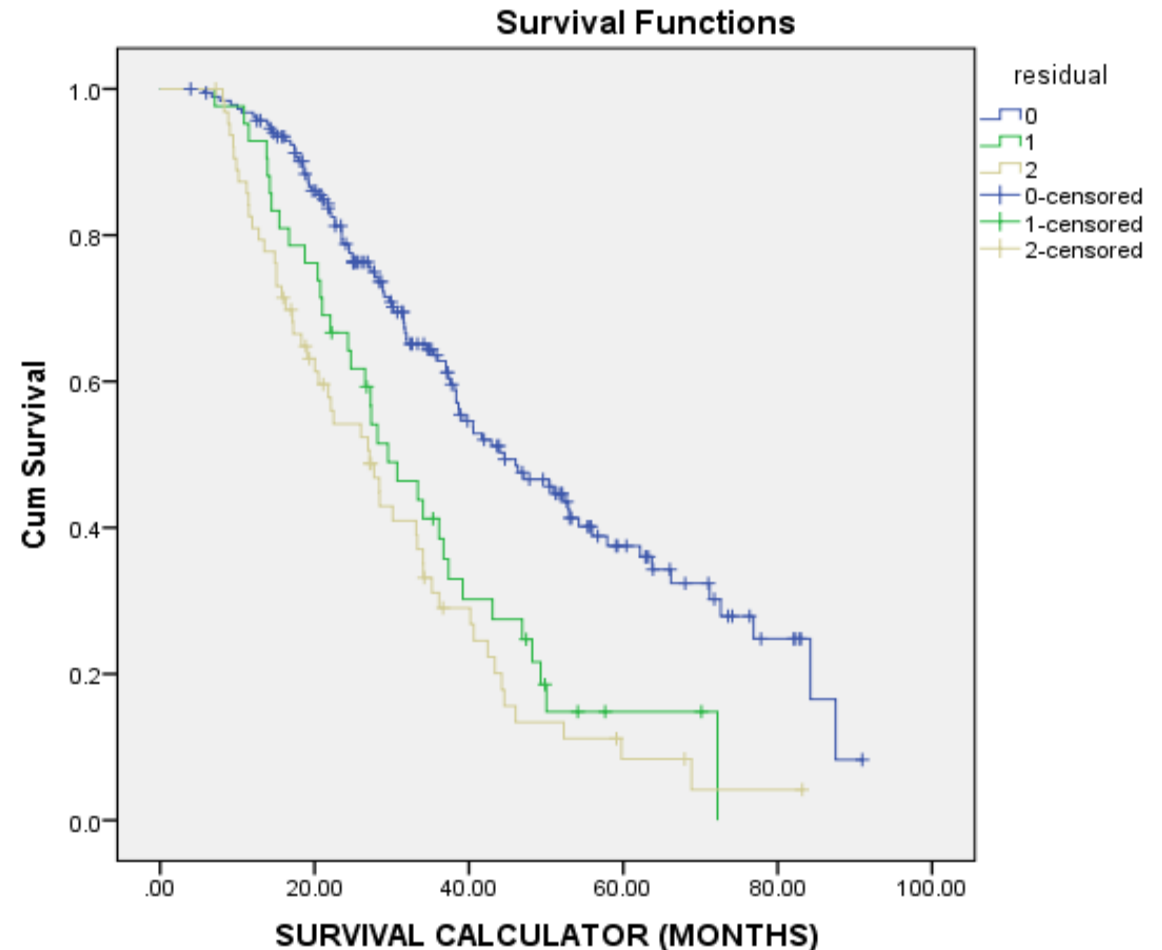
Intention-to-treat population, PS patients



# Delayed Primary Surgery/IDS

COMPLETE CYTOREDUCTION  
SHOULD BE THE AIM

OPTIMAL FOR PALLIATIVE  
BENEFITS OR WHEN CAN BE  
ACHIEVED WITH LESS MORBID  
PROCEDURES?



# Secondary Debulking/Palliative

## Secondary Debulking

- High selective
- Odd disease distributions
- Involved/infiltrated tissue planes
- Limited chemotherapy options
- **NEEDS EXPERIENCE!**

## Palliative

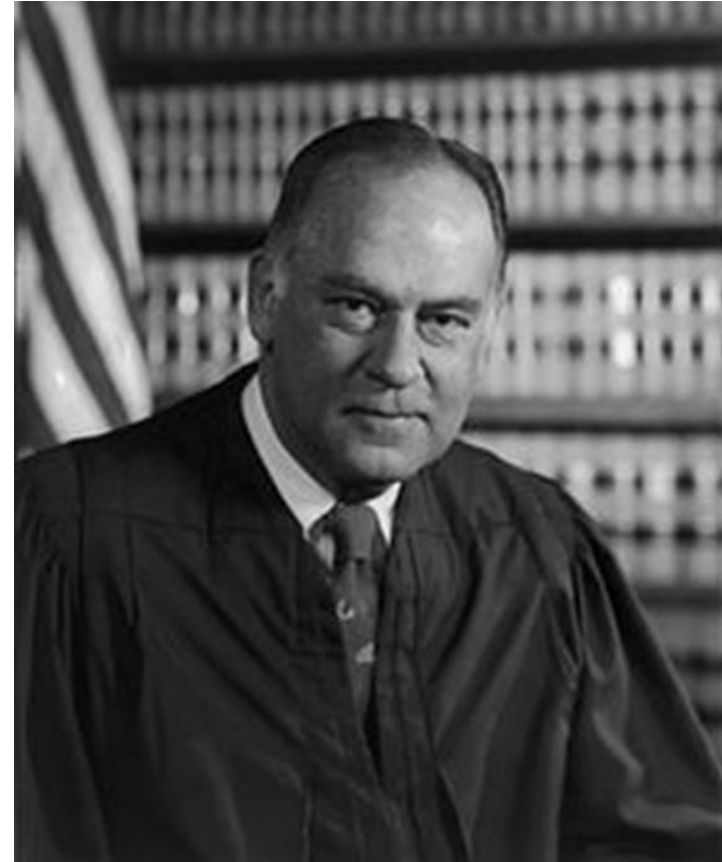
- High selective
- Odd disease distributions
- Involved/infiltrated tissue planes
- Limited chemotherapy options
- **NEEDS EXPERIENCE!**

# ULTRA-RADICAL SURGERY DOESN'T EXIST

---

(Or at least is a meaningless concept)

- “The precise differences between these procedures are not well defined, but some typical features of ultra-radical surgery include:
  - stripping of the diaphragm
  - extensive stripping of the peritoneum
  - multiple resections of the bowel (excluding localised colonic resection)
  - liver resection
  - partial gastrectomy
  - cholecystectomy
  - splenectomy”

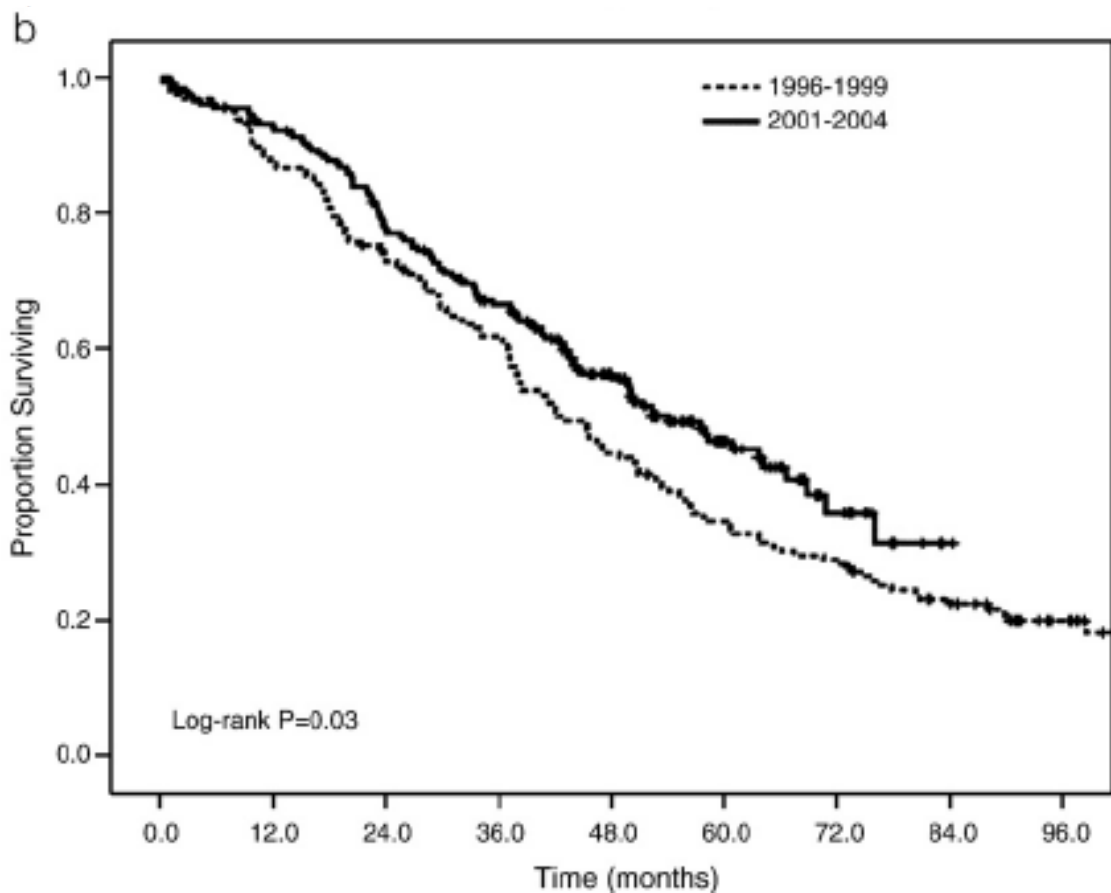


- TAH BSO
- Infracolic omentectomy
- Peritoneal stripping
- Colonic resection
- Small bowel resection
- Ablation of Diaphragm nodules
- Resection of bulky para-aortic nodes
- **NOT ULTRA RADICAL**

- TAH BSO
- Supracolic omentectomy
- Splenectomy
- **ULTRA RADICAL**

## Improved progression-free and overall survival in advanced ovarian cancer as a result of a change in surgical paradigm<sup>☆</sup>

Dennis S. Chi<sup>a,\*</sup>, Eric L. Eisenhauer<sup>a</sup>, Oliver Zivanovic<sup>a</sup>, Yukio Sonoda<sup>a</sup>, Nadeem R. Abu-Rustum<sup>a</sup>, Douglas A. Levine<sup>a</sup>, Matthew W. Guile<sup>b</sup>, Robert E. Bristow<sup>b</sup>, Carol Aghajanian<sup>c</sup>, Richard R. Barakat<sup>a</sup>



**Table 3**

Cytoreductive procedures performed.

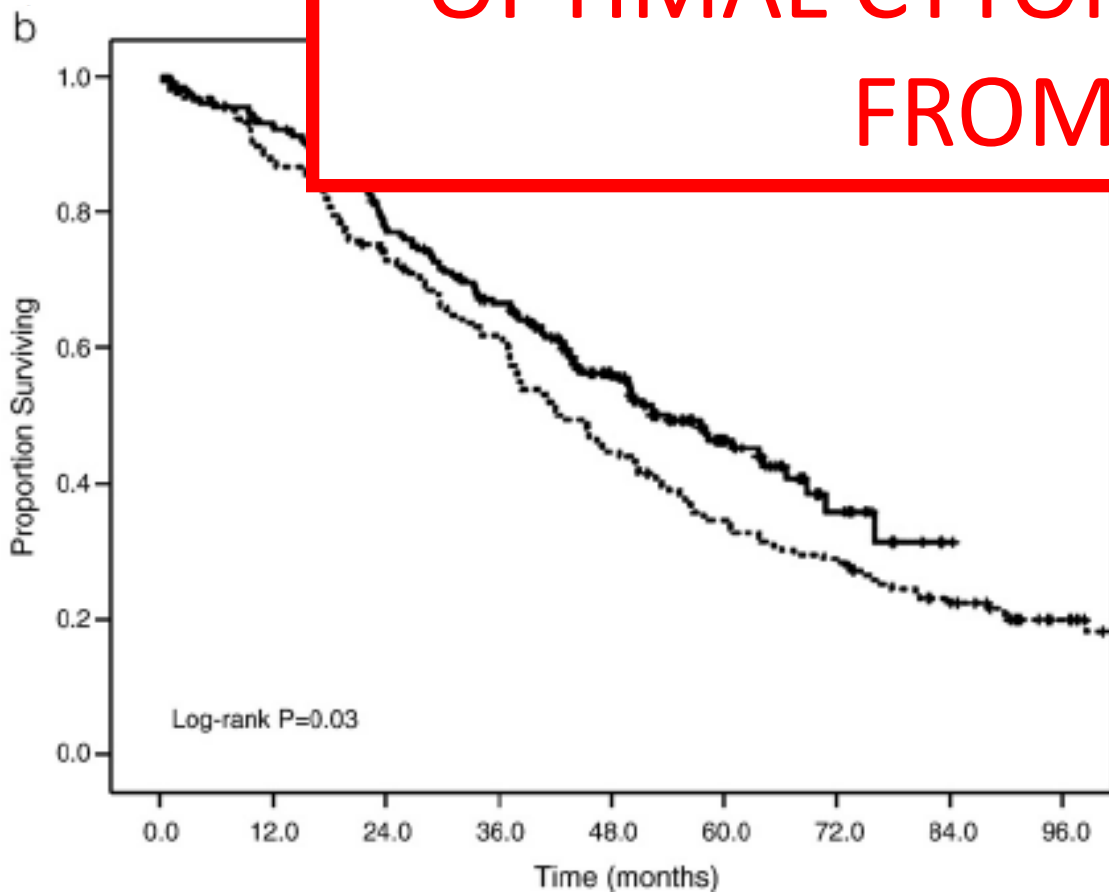
Procedures performed	Group 1 (n = 168)	Group 2 (n = 210)
<b>Standard</b>		
Hysterectomy	129 (77%)	183 (87%)
USO/BSO	153 (91%)	184 (88%)
Omentectomy	135 (80%)	182 (87%)
Small bowel resection	6 (4%)	8 (4%)
Large bowel resection	10 (6%)	73 (35%)
Appendectomy	17 (10%)	37 (18%)
Pelvic lymph node dissection	11 (7%)	59 (28%)
Para-aortic lymph node dissection	11 (7%)	47 (22%)
<b>Extensive upper abdominal</b>		
Diaphragm peritonectomy/resection	0 (0%)	73 (35%)
Splenectomy	0 (0%)	26 (12%)
Distal pancreatectomy	0 (0%)	9 (4%)
Liver resection	0 (0%)	13 (6%)
Resection porta hepatis tumor	0 (0%)	11 (5%)
Cholecystectomy	0 (0%)	10 (5%)

USO, unilateral salpingo-oophorectomy; BSO, bilateral salpingo-oophorectomy.

Improved progression-free and overall survival in advanced ovarian cancer as a result of a change in surgical paradigm<sup>☆</sup>

Dennis S. Chi<sup>a,\*</sup>, Eric L. B...  
Douglas A. Levine<sup>a</sup>, Matt...

# OPTIMAL CYTOREDUCTION IMPROVED FROM 46% TO 80%



	Group 1 (n=210)	Group 2 (n=210)
<b>Standard</b>		
Hysterectomy	129 (77%)	183 (87%)
USO/BSO	153 (91%)	184 (88%)
Omentectomy	135 (80%)	182 (87%)
Small bowel resection	6 (4%)	8 (4%)
Large bowel resection	10 (6%)	73 (35%)
Appendectomy	17 (10%)	37 (18%)
Pelvic lymph node dissection	11 (7%)	59 (28%)
Para-aortic lymph node dissection	11 (7%)	47 (22%)
<b>Extensive upper abdominal</b>		
Diaphragm peritonectomy/resection	0 (0%)	73 (35%)
Splenectomy	0 (0%)	26 (12%)
Distal pancreatectomy	0 (0%)	9 (4%)
Liver resection	0 (0%)	13 (6%)
Resection porta hepatis tumor	0 (0%)	11 (5%)
Cholecystectomy	0 (0%)	10 (5%)

USO, unilateral salpingo-oophorectomy; BSO, bilateral salpingo-oophorectomy.



# Aggressive and complex surgery for advanced ovarian cancer: An economic analysis

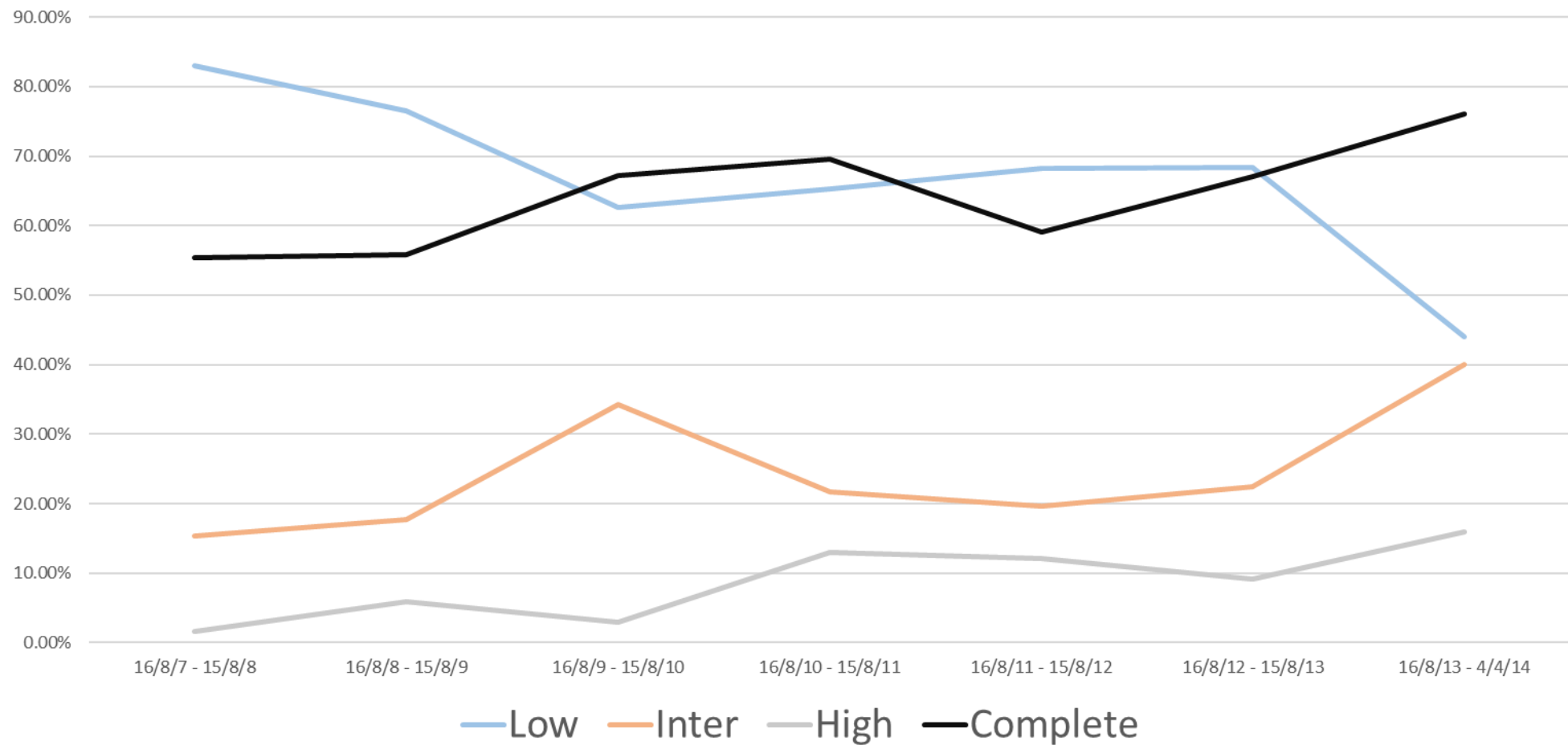
Giovanni D. Aletti<sup>a</sup>, Karl C. Podratz<sup>a</sup>, James P. Moriarty<sup>b</sup>,  
William A. Cliby<sup>a,\*</sup>, Kirsten Hall Long<sup>b</sup>

Table 1  
Surgical complexity scoring system based upon complexity and number of surgical procedures performed

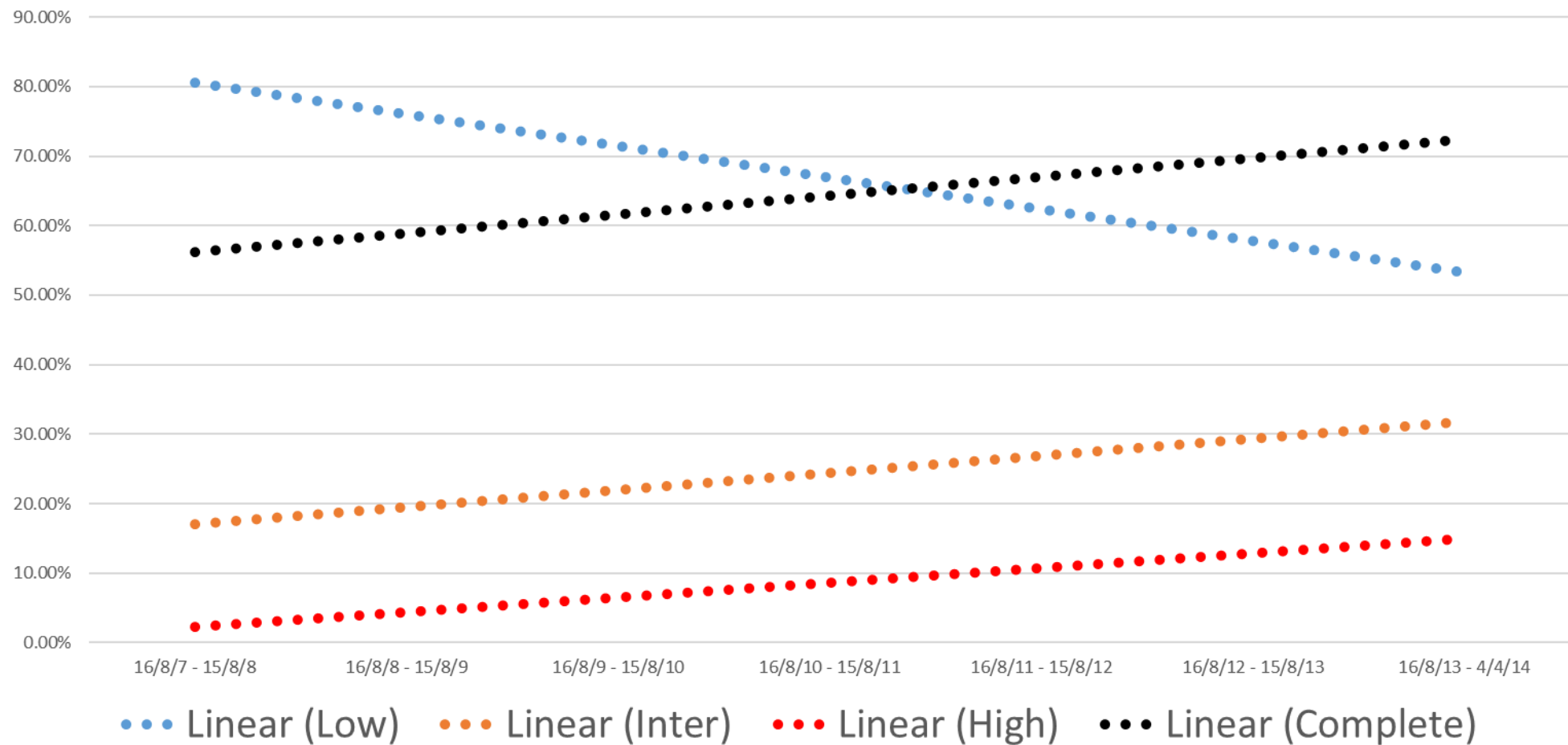
<i>Procedure</i>	<i>Points</i>
TH-BSO	1
Omentectomy	1
Pelvic lymphadenectomy	1
Para-aortic lymphadenectomy	1
Pelvic peritoneum stripping	1
Abdominal peritoneum stripping	1
Recto-sigmoidectomy_T-T anastomosis	3
Large bowel resection	2
Diaphragm stripping/resection	2
Splenectomy	2
Liver resection/s	2
Small bowel resection/s	1
<i>Complexity score groups</i>	
1 (Low)	≤ 3
2 (Intermediate)	4–7
3 (High)	≥ 8

TH-BSO, total hysterectomy, bilateral salpingo-oophorectomy.

## Complexity of surgery: change by year



# Complexity of surgery: change by year



- THE GOAL IS TO IMPROVE CYTOREDUCTION RATES INTO PROGNOSTICALLY BENEFICIAL GROUPS
- “ULTRA RADICAL” DESCRIBES (POORLY) TECHNIQUES TO ACHIEVE THAT AIM
- THE QUESTION IS CAN THEY BE ACHIEVED SAFELY?

SLOW AND DRY IS PREFERABLE  
TO FAST AND WET

---

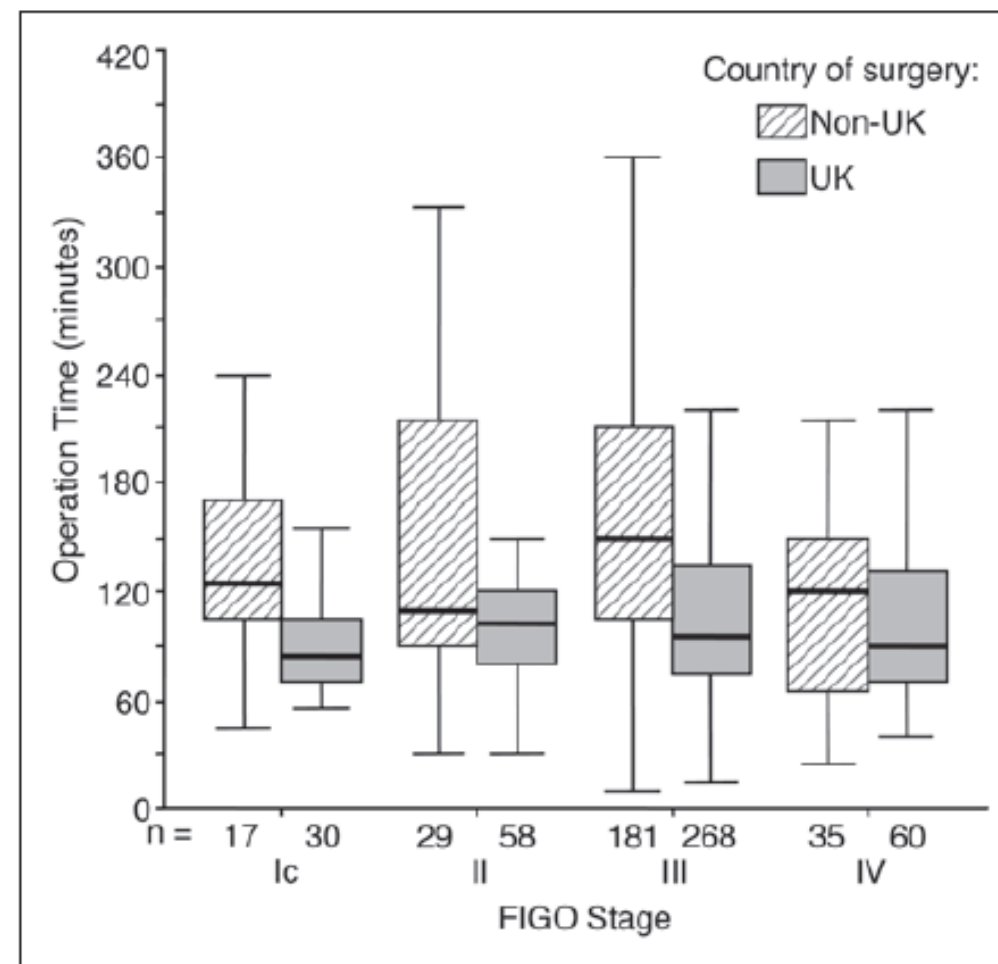
(and experience is king)

# Does Aggressive Surgery Only Benefit Patients With Less Advanced Ovarian Cancer? Results From an International Comparison Within the SCOTROC-1 Trial

Simon C. Crawford, Paul A. Vasey, Jim Paul, Andrea Hay, Jo A. Davis, and Stan B. Kaye

**Table 1.** Patient Characteristics by Country Group

Characteristic	Country of Surgery (% of patients)	
	Non-UK (n = 388)	UK (n = 689)
Age, years		
Median	58	59
Range	20-85	19-84
Preoperative log <sub>10</sub> (CA-125)*		
Median	2.70	2.78
Range	0.30-4.60	1.00-4.70
FIGO stage		
IC	6.4	7.8
II	11.6	12.6
III	69.1	64.0
IV	12.9	15.5



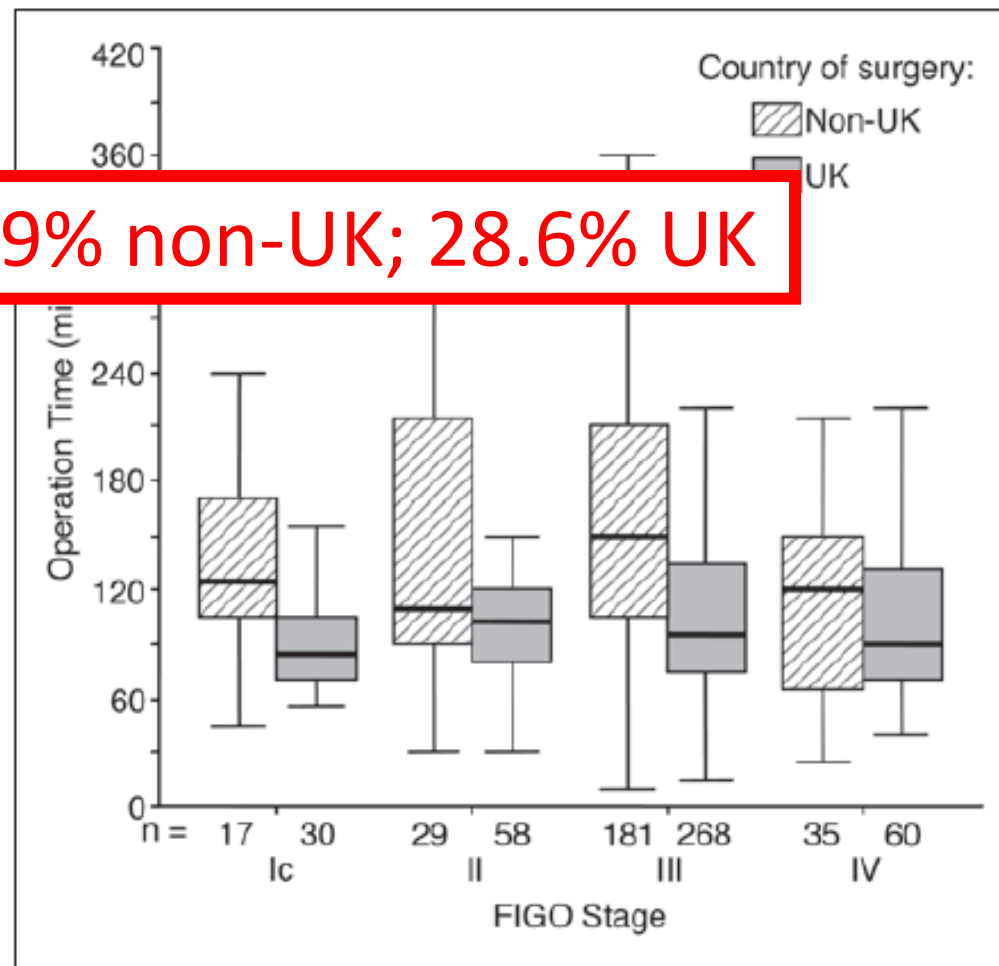
# Does Aggressive Surgery Only Benefit Patients With Less Advanced Ovarian Cancer? Results From an International Comparison Within the SCOTROC-1 Trial

Simon C. Crawford, Paul A. Vasey, Jim Paul, Andrea Hay, Jo A. Davis, and Stan B. Kaye

**Table 1.** Patient Characteristics by Country Group

Characteristic	Country of Surgery	
	(n = 388)	(n = 689)
Age, years		
Median	58	59
Range	20-85	19-84
Preoperative log <sub>10</sub> (CA-125)*		
Median	2.70	2.78
Range	0.30-4.60	1.00-4.70
FIGO stage		
IC	6.4	7.8
II	11.6	12.6
III	69.1	64.0
IV	12.9	15.5

**Complete cytoreduction rate: 39.9% non-UK; 28.6% UK**



- Median operating times 180 mins (IQR 120 – 255)
- Median EBL: 300mls (IQR 100 – 500)
- LoS 6 days (IQR 4-8)
- Readmission rate: 7.5%





<b>Surgical complexity</b>	<b>Number of patients</b>	<b>ACCI</b>	<b>n(%)</b>	<b>MSKCC Grade 1-2(%)</b>	<b>MSKCC Grade 3+(%)</b>
LOW <3	198 (67.57%)*	0-1	48(24.49)	14(29.17)	2(4.17)
		2-3	106(54.08)	28(26.42)	1(0.94)
		4+	42(21.43)	17(40.48)	1(2.38)
INTER 4-7	68 (23.21%)**	0-1	13(20.00)	3(23.08)	2(15.38)
		2-3	45(69.23)	20(44.44)	6(13.33)
		4+	7(10.77)	6(85.71)	0(0.00)
HIGH 8+	27 (9.22%)**	0-1	12(48.00)	4(44.33)	3(25.00)
		2-3	8(32.00)	4(50.00)	2(25.00)
		4+	5(20.00)	4(80.00)	1(20.00)

# Extensive Primary Cytoreductive Surgery for Advanced Epithelial Ovarian Cancer

FRANCO GUIDOZZI, M.B.B.CH., MRCOG, AND JAQUELINE H. S. BALL, B.S., M.B.B.CH., FCOG

*Department of Obstetrics and Gynaecology, University of the Witwatersrand Medical School, 7 York Road, Parktown, 2193, Johannesburg, South Africa*

- 10 year time period
- 30 cases
- Mean age 56.2yrs
- Mean EBL: 2900mls
- Average blood transfusion: 2600mls
- DIC in 33%
- 76% achieved <2cm residual
- 43% severe post op complications
- 6.66% 48 hours mortality

but in our own unit the 43% significant complication rate has dampened our enthusiasm to perform multiple organ cytoreductive surgery.

# How to get good results?

- Experience
- Knowledge of anatomy
- Patient selection
- Haemostasis
- Meticulous dissection
- Technology
- Awareness of limits

QUALITY OF SURGERY REQUIRES  
MORE THAN JUST “COMPLETE”

---

# Proposed Outcome Measures

- Cohort factors
  - Number of cases
  - Percentage operated on
- Patient factors
  - Albumin/performance status/ACCI/depravation status
- Procedural parameters
  - Cytoreduction rate
  - Splens/diaphragms/bowel resections
  - Histological confirmation!
- Intraoperative factors
  - EBL/time/incision length
- Post operative outcomes
  - Grade 3+ morbidity
  - 30 day mortality

<b>Author</b>	<b>Year</b>	<b>Country</b>	<b>Minimum Stage +</b>	<b>Size of Cohort</b>	<b>Splenectomies n (%)</b>
<b><i>Guidozzi</i></b>	<i>1994</i>	South Africa	3	148	8 (5.4)
<b><i>Nicklin</i></b>	<i>1995</i>	USA	3C	210	11 (5.2)
<b><i>Khun</i></b>	<i>1998</i>	Germany	3	107	17 (15.9)
<b><i>Eisenkop</i></b>	<i>2006</i>	USA	3C	404	49 (12.1)
<b><i>Goff</i></b>	<i>2006</i>	USA	3	6375	121 (1.9)
<b><i>Aletti</i></b>	<i>2006</i>	USA	3C	194	12 (6.2)
<b><i>Eisenhauer</i></b>	<i>2006</i>	USA	3C	262	17 (6.5)
<b><i>Magtibay</i></b>	<i>2006</i>	USA	3C	194	12 (6.1)
<b><i>Sehouli</i></b>	<i>2009</i>	Germany	3	186	3 (1.6)
<b><i>Chi</i></b>	<i>2009</i>	USA	3C	210	26 (12.4)
<b><i>Kommoss</i></b>	<i>2010</i>	Germany	3B	267	32 (12.0)
<b><i>Vergote</i></b>	<i>2010</i>	Europe	3C (NACT) 3C (Primary)	322 310	13 (4.0) 18 (5.8)
<b><i>McCann</i></b>	<i>2011</i>	USA	3	660	44 (6.7)
<b><i>Luyckx</i></b>	<i>2012</i>	France	3C	527	50 (9.5)
<b><i>Tanner</i></b>	<i>2013</i>	USA	3B	576	97 (16.8)
<b><i>Phillips</i></b>	<i>2015</i>	UK	3C	412	39 (9.5)

ANY QUESTIONS?

---

- ‘Poor are those that have eyes but cannot see’
  - ‘When all you have is a hammer, everything looks like a nail’
  - Ultra-radical surgery doesn’t exist
  - Slow and dry is preferable to fast and wet
  - Quality of surgery requires more than just ‘complete’
-