FIGO staging, cancer datasets and the ICCR

Dr Lynn Hirschowitz

Birmingham Women's NHS
NHS Foundation Trust

1. Cancer staging (including FIGO)
2. Specific points about FIGO staging
3. International Collaboration on Cancer Reporting (ICCR)
4. New ICCR ovarian/fallopian tube/ primary peritoneal carcinoma dataset

1. General principal for cancer staging systems

- Stage I: tumour that is strictly confined to the organ of origin
- Stage II: tumour that has extended locally beyond the site of origin to involve adjacent organs or structures
- Stage III: more extensive local involvement or infiltration of neighbouring organs
- Stage IV: tumour with distant metastases

General principal for all staging systems

- 4 basic stages divided into substages to reflect tumour-specific clinical, pathological or biological prognostic factors within a given stage.
- Most staging systems have moved from clinical staging to ‘surgico-pathological’ staging (apart from cervical cancer and gestational trophoblastic disease).

FIGO staging system

- Internationally agreed system for gynaecological cancers
- FIGO staging predates other systems
- Annual reports and ‘horizon scanning’ to provide evidence for revisions
- FIGO Committee for Gynecologic Oncology

Members FIGO Gynaecological Oncology Committee 2012-2015

- Professor Lynette Denny (Chair), South Africa
- Professor Michael Quinn (Co-Chair), Australia
- Professor Sergio Pecorelli, Italy
- Dr Adriana Bermudez, Argentina
- Dr David Mutch, USA
- Professor Neville Hacker, Australia
- Professor Jaime Prat, Spain
- Professor Elisabeth Åvall Lundqvist, Sweden
- Professor Joanna Cain, USA
- Professor Keiichi Fujiwara, Japan
- Dr Shyam Kishore Shrivastava, India
- Professor Muhieddine A-F Seoud, Lebanon
- Dr Neerja Bhatla, India

FIGO, AJCC, TNM/UICC

- Reciprocal representation
- Collaboration but no agreed co-ordination of timing of revisions
- TNM staging focus remains ‘anatomic’
- AJCC staging – moves to include ‘non-anatomic’ data
- FIGO position; dictated by prognosis

On the FIGO radar -

Possible issues:

- Stage III vulval cancer
- LVI in cervical cancer
- Extracapsular invasion and LN metastases in cervical cancer
- Stage I endometrial cancer

2. Specific points about FIGO staging - vulva

- Poor spread of prognostic groupings with1988 surgical staging system for stage III.
- Importance of lymph node status, number of positive nodes, size of deposits, extracapsular extension recognised in 2009 revision.
- Tumour size: node negative IB and II combined (IB).

Specific points about FIGO staging - cervix

- Clinically staged but FIGO recognises importance of pre-treatment clinical staging.
- Use of COSD in UK.
- Stage IIA subdivided to take account tumour size (4 cm or > 4cm).
- Recording of lymph node involvement.

Specific points about FIGO staging - uterus

Clinical scenario:

60 mm uterine tumour; outer half myometrial invasion; cervical stromal infiltration; parametrial lymphovascular invasion.

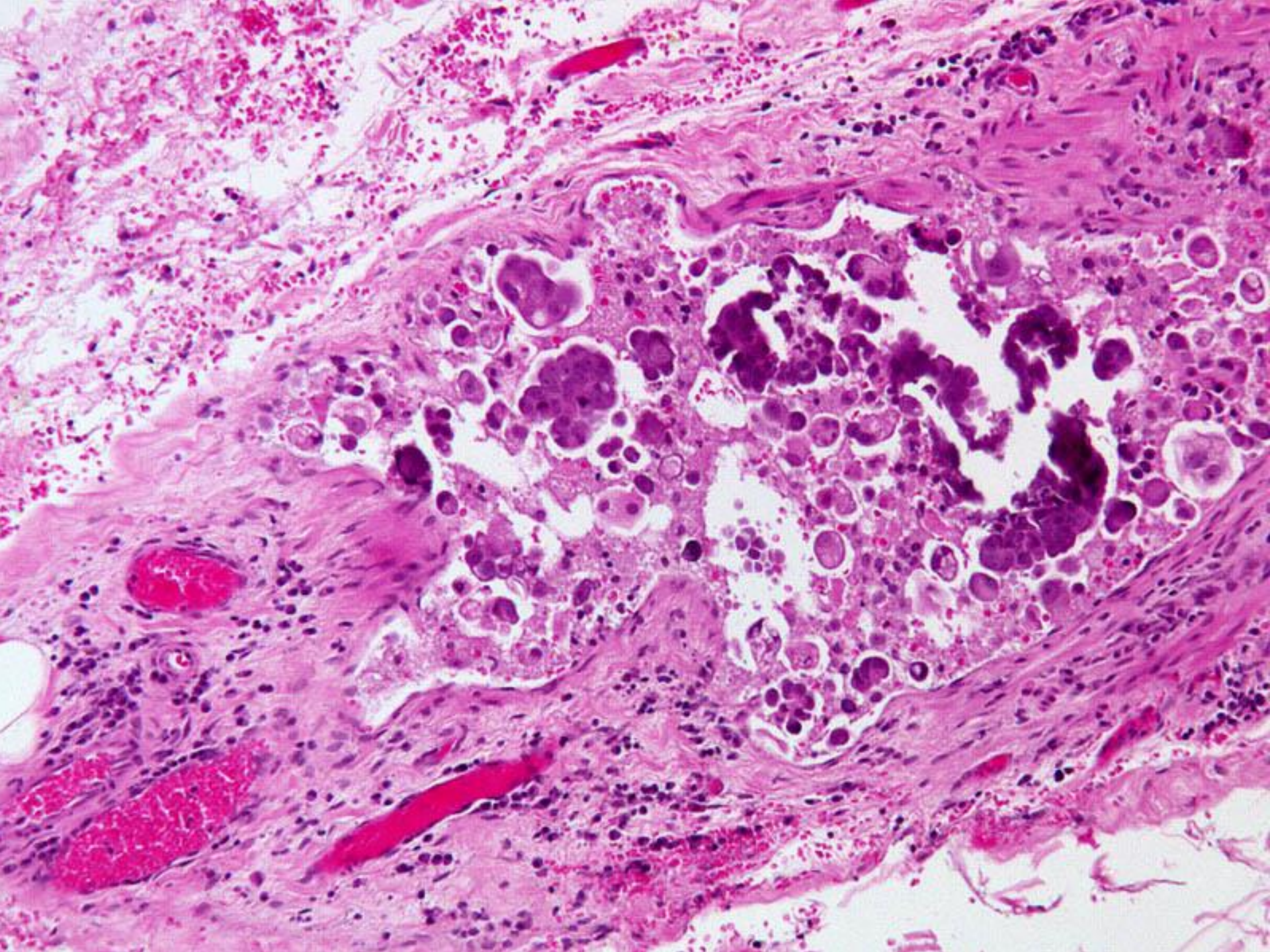
What is the FIGO stage if this is:

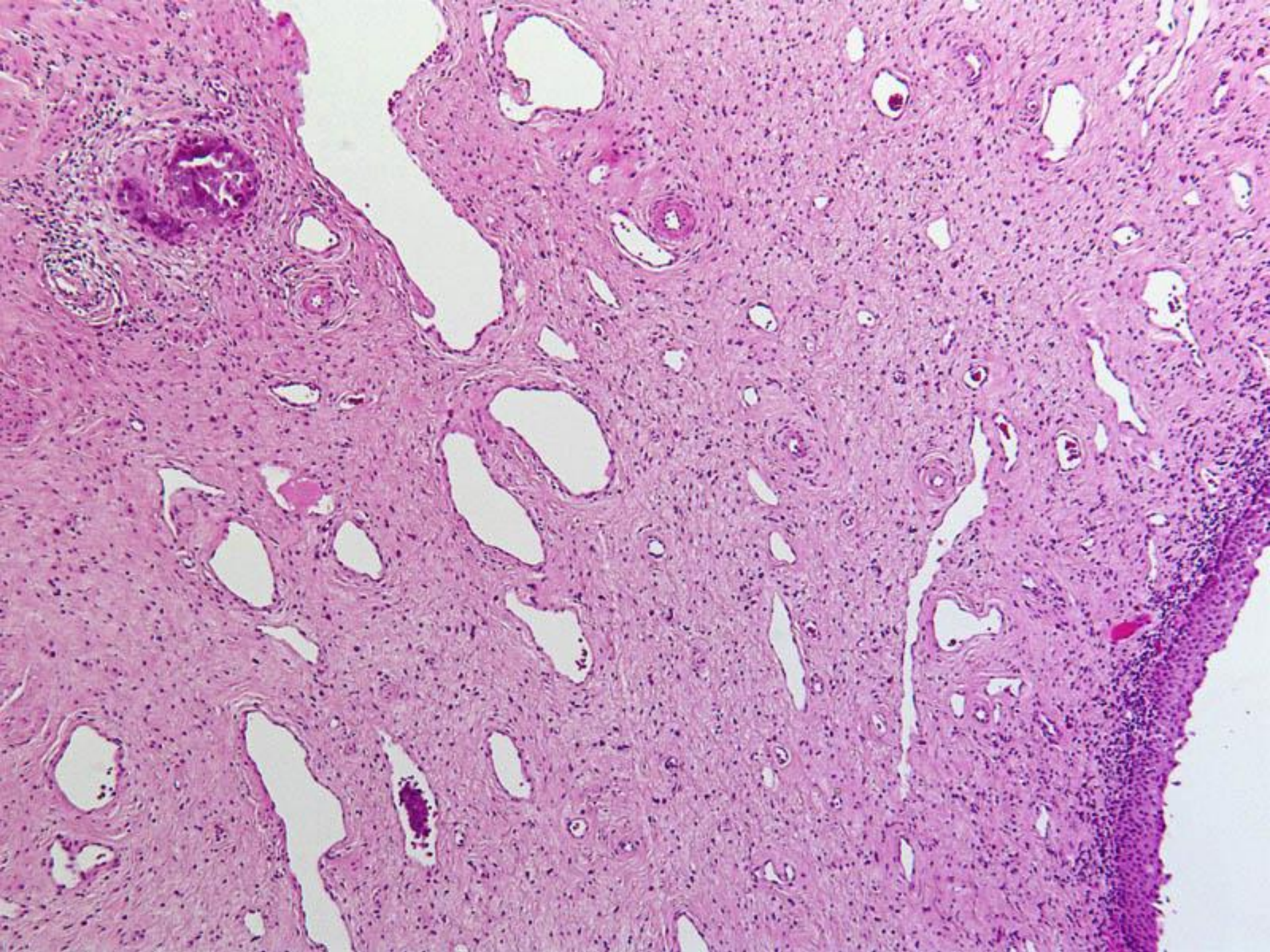
- Carcinosarcoma
- Leiomyosarcoma
- Adenosarcoma

Specific points about FIGO staging - uterus

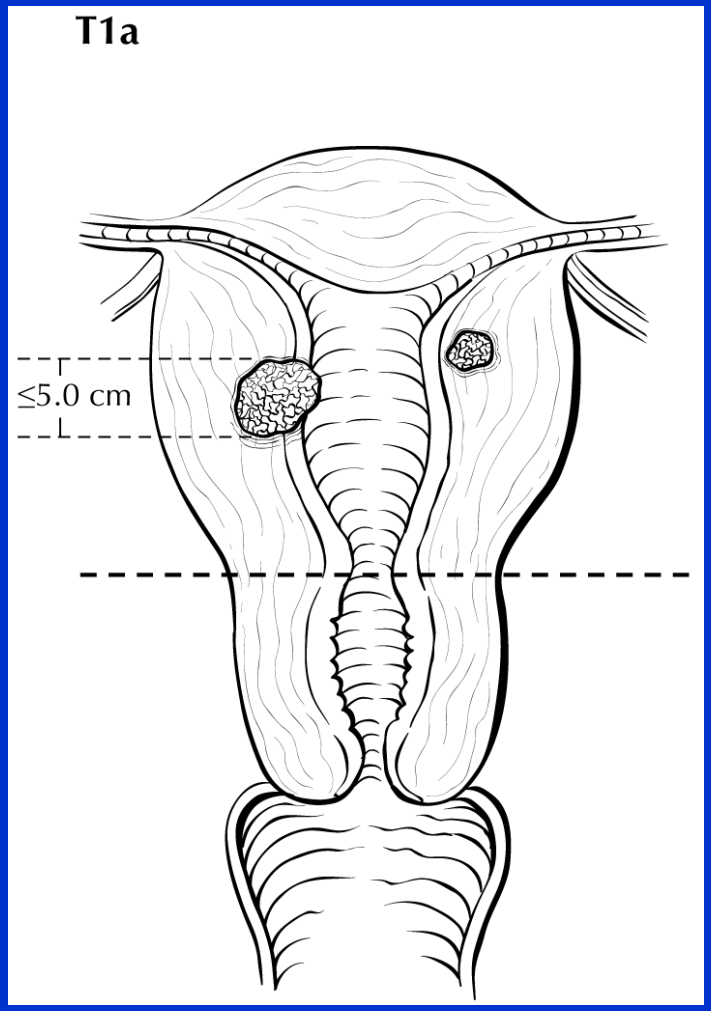
Carcinosarcoma (= metaplastic carcinoma)

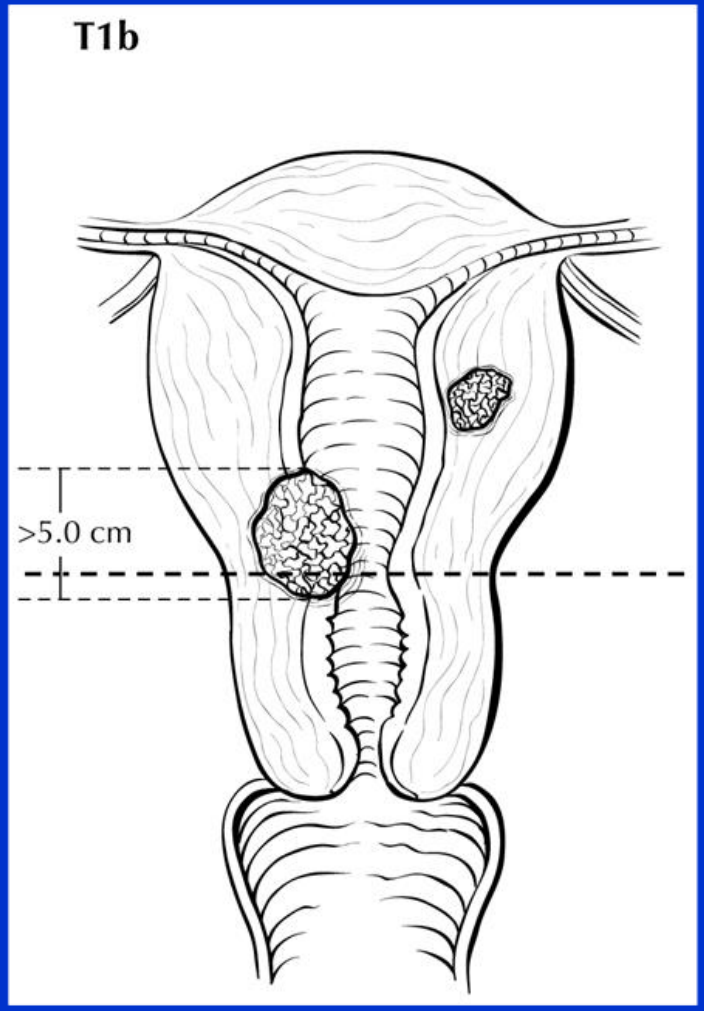
- Staged in the same way as endometrial carcinoma
- Lymphovascular invasion without tissue invasion does not count towards staging
- [Size is a predictor of poor prognosis/ ‘peritoneal failure’ for carcinomas]
- Cervical stromal involvement is FIGO stage II





Leiomyosarcoma





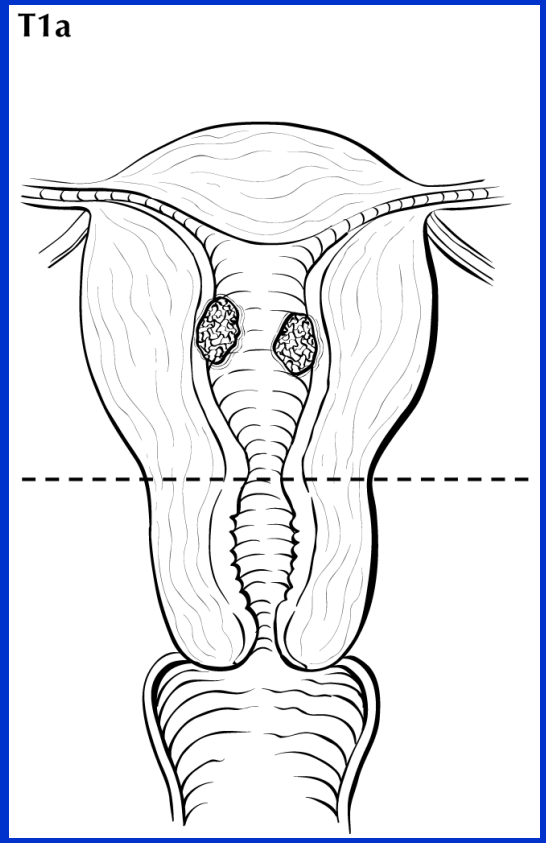
AJCC 2013

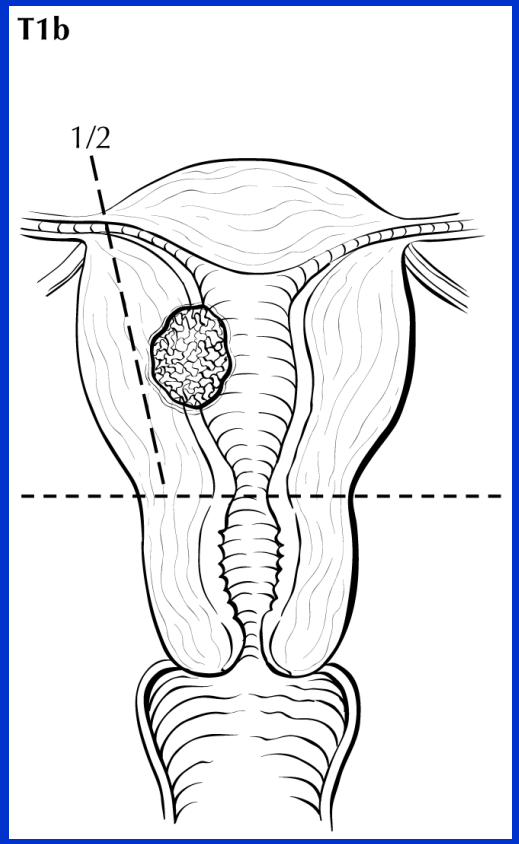
Specific points about FIGO staging - uterus

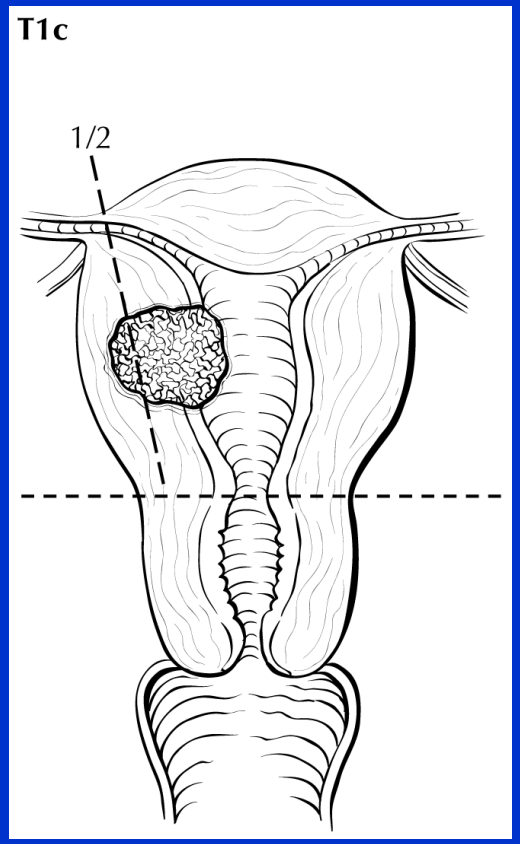
Leiomyosarcoma

- Staged in the same way as endometrial stromal sarcoma (usually myometrial based)
- Cervical involvement contributes to prognosis but not to stage
- Lymphovascular invasion without tissue invasion does not count towards staging
- Tumour size is important for staging
- FIGO stage = IB (>5 cm)

Adenosarcoma







AJCC 2013

Specific points about FIGO staging - uterus

Adenosarcoma

- Usually endometrial based.
- Stage I = same as 1988 system for endometrial carcinoma.
- Cervical involvement does not contribute to stage.
- Size is not important for staging.
- Lymphovascular invasion without tissue invasion does not count towards staging.
- FIGO stage = IC (outer ½ myoinvasion).

Specific points about FIGO staging – uterine sarcomas

- Corrigendum published in 2009
- Undifferentiated endometrial/uterine sarcoma
- Pure heterologous uterine sarcoma

Specific points about FIGO staging – ovary/FT/PPCa

- Subdivision of stage IC.
- No evidence to support upstaging because of adhesions.
- Stage IIIA – no evidence that size of nodal deposits (≤10 mm; >10 mm) is significant.
- Intraperitoneal node involvement = IIIC
- Cytological node involvement of unknown size = Stage IIIA1(i)

International Collaboration on Cancer Reporting

International Collaboration on Cancer Reporting
5 founding members

Incorporation September 2014

ICCR Board

- **Management issues**
- **Governance**
- **Finance**
- **Publicity**
- **Membership**
- **Strategic Alliances**

ICCR Steering Group

Dataset development
Dataset revision

International Collaboration on Cancer Reporting

Strategic Alliances:

UICC

FIGO

AJCC

EORTC

IARC

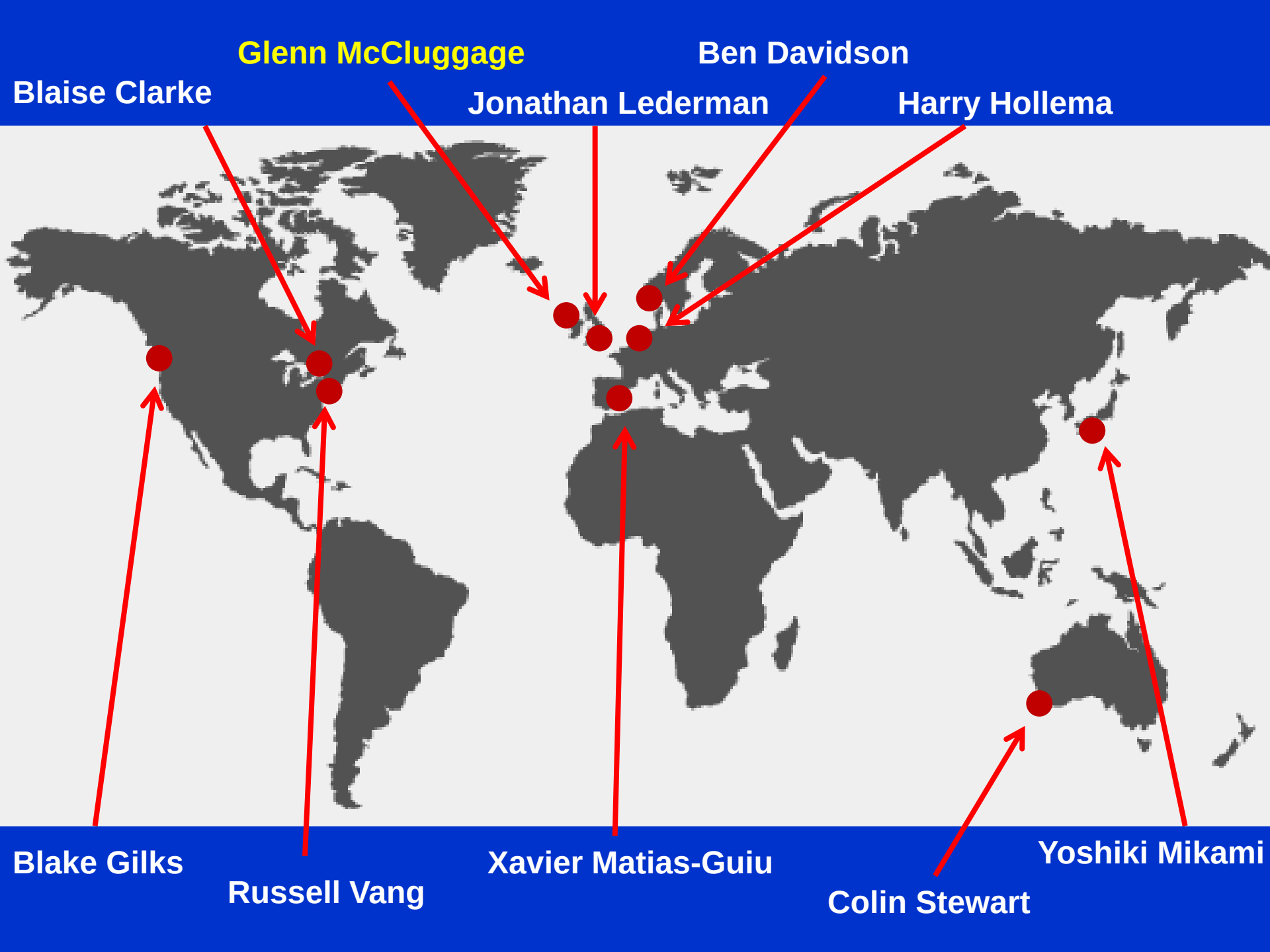
Alignment of ICCR dataset development with the IARC revision of the ‘Blue book’ series

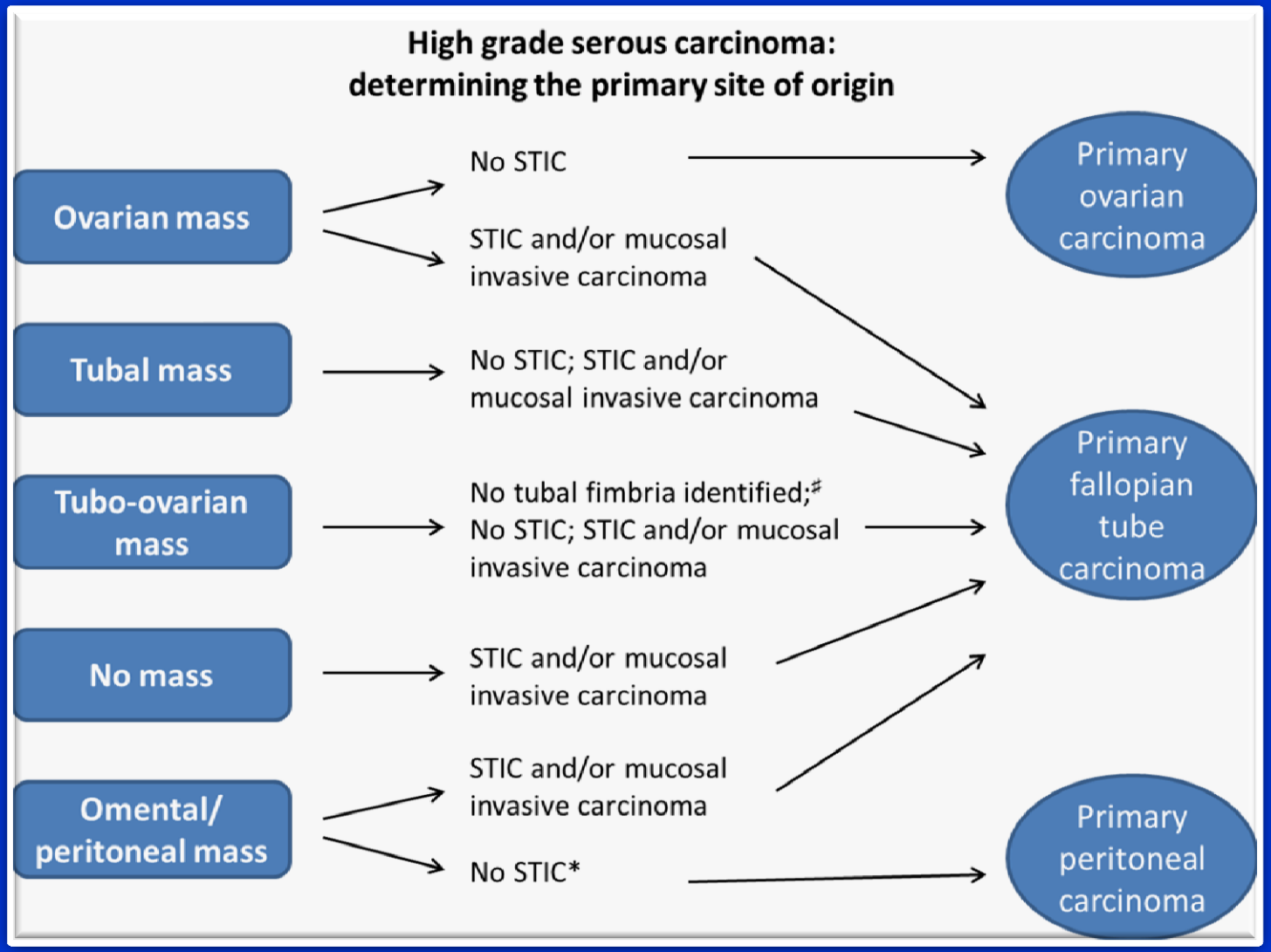
Development of evidence-based ICCR cancer datasets

- Robust protocols for dataset development.
- Evidentiary support at NHMRC Level III-2 or above.
- Two key dataset components:
  - REQUIRED elements, essential for histological diagnosis, clinical management, staging, prognosis.
  - RECOMMENDED elements, non-mandatory, clinically important; recommended as good practice but not yet validated or regularly used in patient management.

4. Development of dataset for carcinoma of the ovary, fallopian tube and primary peritoneal site

- Single dataset for all 3 sites.
- Incorporates 2014 WHO classification of tumours of the female reproductive organs.
- Incorporates 2013 FIGO staging.
- Includes guidance about site assignment of primary tumours.
- Includes guidance about chemotherapy response score/CRS (tumour regression grading).


Glenn McCluggage
Ben Davidson
Blaise Clarke
Jonathan Lederman
Harry Hollema
Blake Gilks
Russell Vang
Xavier Matias-Guiu
Yoshiki Mikami
Colin Stewart



Failure to detect the tubal fimbria implies overgrowth by tumour
* Apply criteria as specified in the commentary

Primary peritoneal carcinoma

- Diagnosis only after complete examination of the fallopian tubes (including the non-fimbrial portions)
- Ovaries must be of normal size or enlarged by a benign process
- Involvement in extra-ovarian sites > involvement on the surface of either ovary
- Ovarian tumour involvement must be non-existent, confined to ovarian surface without stromal invasion or involve the cortical stroma with tumour size less than 5 x 5 mm.

Chemotherapy Response Score

- Applies to serous carcinomas only.
- Score on a single H&E-stained section.
- Use single block of involved omental tissue with *least* response to chemotherapy.
- Assess *viable* tumour. The presence of fibrosis may be helpful in marking the site of previous tumour infiltration.
- 3-tier system: as a guide, >95% of tumour should be viable for a score of 1, and <5% for a score of 3.

Chemotherapy Response Score (CRS)

Score	Criterion	Tumour Regression Grading
1	Mainly viable tumour with minimal regression-associated fibro-inflammatory changes* limited to a few foci.	No or minimal tumour response
2	Multifocal or diffuse regression-associated fibro-inflammatory changes, with viable tumour ranging from diffuse sheets, streaks or nodules, to extensive regression with multifocal but easily identifiable residual tumour.	Partial tumour response
3	Mainly regression, with few irregularly scattered individual tumour cells or cell groups (all measuring less than 2 mm), or no residual tumour identified.	Complete or near-complete response

*** Regression-associated fibro-inflammatory changes: fibrosis associated with macrophages, including foam cells, mixed inflammatory cells and psammoma bodies; to be distinguished from tumour-related inflammation or desmoplasia.**

Epidemiology and population health management

Monitoring of screening programmes

International comparison of patient outcomes

National comparison of patient outcomes

Robust data for translational and clinical research

Accurate registration of cancer specific data

Correct patient prognosis

Optimum patient management

Accurate diagnosis and tumour stage