Setting up a thoracoscopy service

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Why do I need a thoracoscopy service?

- Malignant pleural disease common
- Cytology not very good esp in mesothelioma
- Thoracic surgery in regional centres
- Can diagnose and treat in one go
- Shortens diagnostic pathway
- Other tumour sites

How do I get one?

- Invest in a lead for pleural diseases
- Develop a business case
- Other developments
  - Ambulatory services
  - Pleural nurse
  - GIRFT recommendations

BTS statement on medical thoracoscopy 2010

- '…increasing burden of disease…'
- '…technique of highest diagnostic yield for both malignant and benign conditions…'
- '…high diagnostic yield and effective pleurodesis in a single procedure.'

Local audit

	KMH	Derby
Mean time to diagnosis	19 days (11-52)	35 days (14-20)
Mean inpatient stay	4.5 days	7 days

Diagnostic rates

- Thoracoscopy – 95%
- Image-guided biopsy – 88%

Who might benefit?

- Need a diagnosis and suspicious of malignancy or infection ✔
- Need more tissue for molecular testing (✔)
- Need a diagnosis and to manage fluid ✔
- Staging of lung malignancy ✔
- Biopsying pleural nodules ✔

- Just need to manage fluid ✘
- Just need to get a pleurodesis ✘
- Management of pleural infection ✘

What sort of patient?

- Good performance status (2 or better)
- No significant underlying respiratory disease (type II resp failure)
- No intractable cough
- Beware CKD and CCF
- Can access pleural space
  - body habitus
  - location of fluid
  - presence of fluid

What do you need?

- Equipment
- Protocols (procedure, bleed)
- A room (endoscopy/theatre/procedure room)
- Capable staff (assistant)
- Workup and follow-up mechanism

Before the procedure

- Workup
  - FBC
  - coagulation if abnormality suspected
  - [ECG, group and save]
  - Consent (pain, infection, bleeding)
  - Information leaflet
  - [Diagnostic pleural tap in clinic to confirm exudate]
  - [procedure proforma]

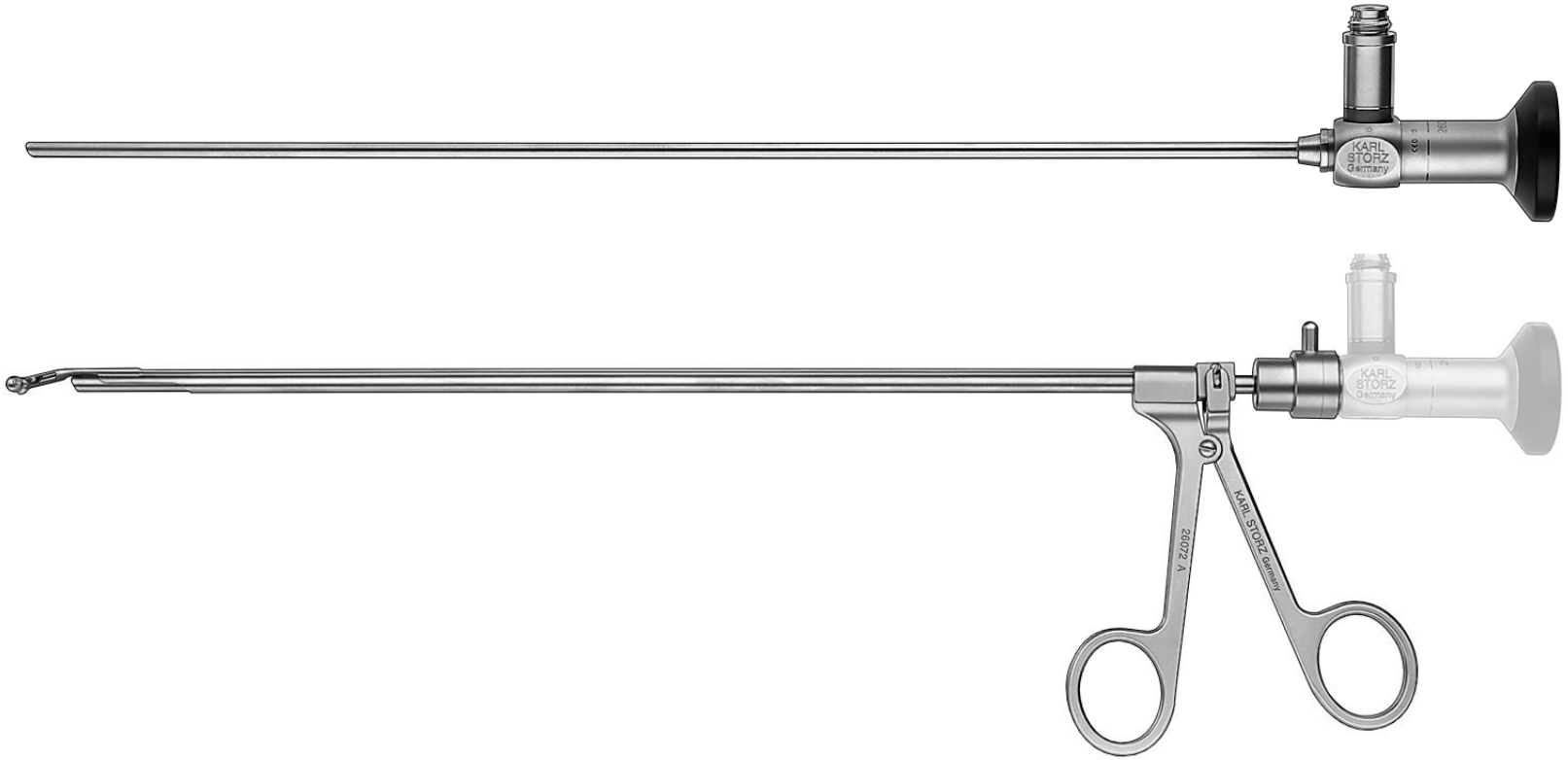
NHS
Sherwood Forest Hospitals
NHS Foundation Trust

INFORMATION FOR PATIENTS

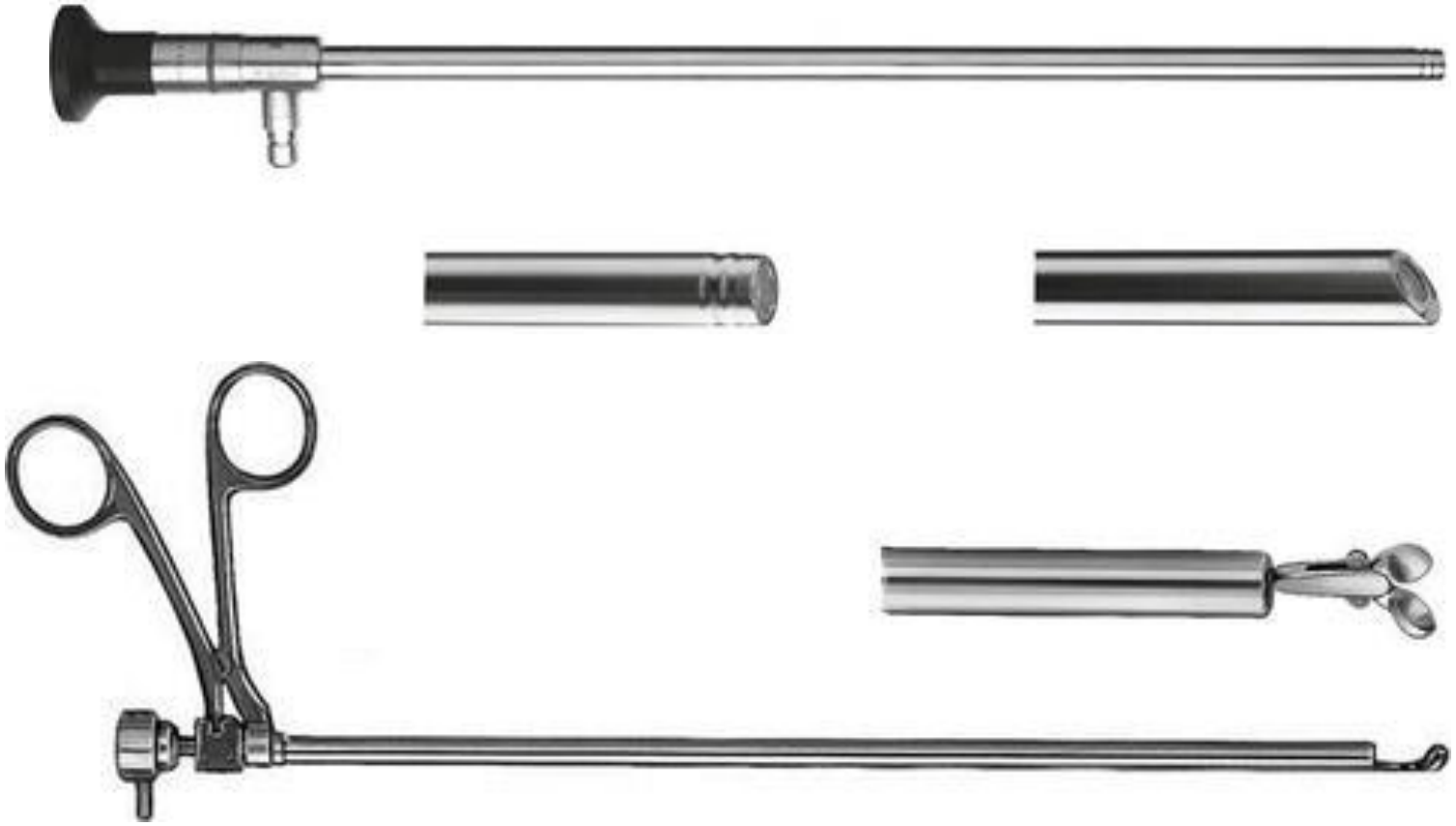
Thoracoscopy

Equipment

Storz, 30 degree scope



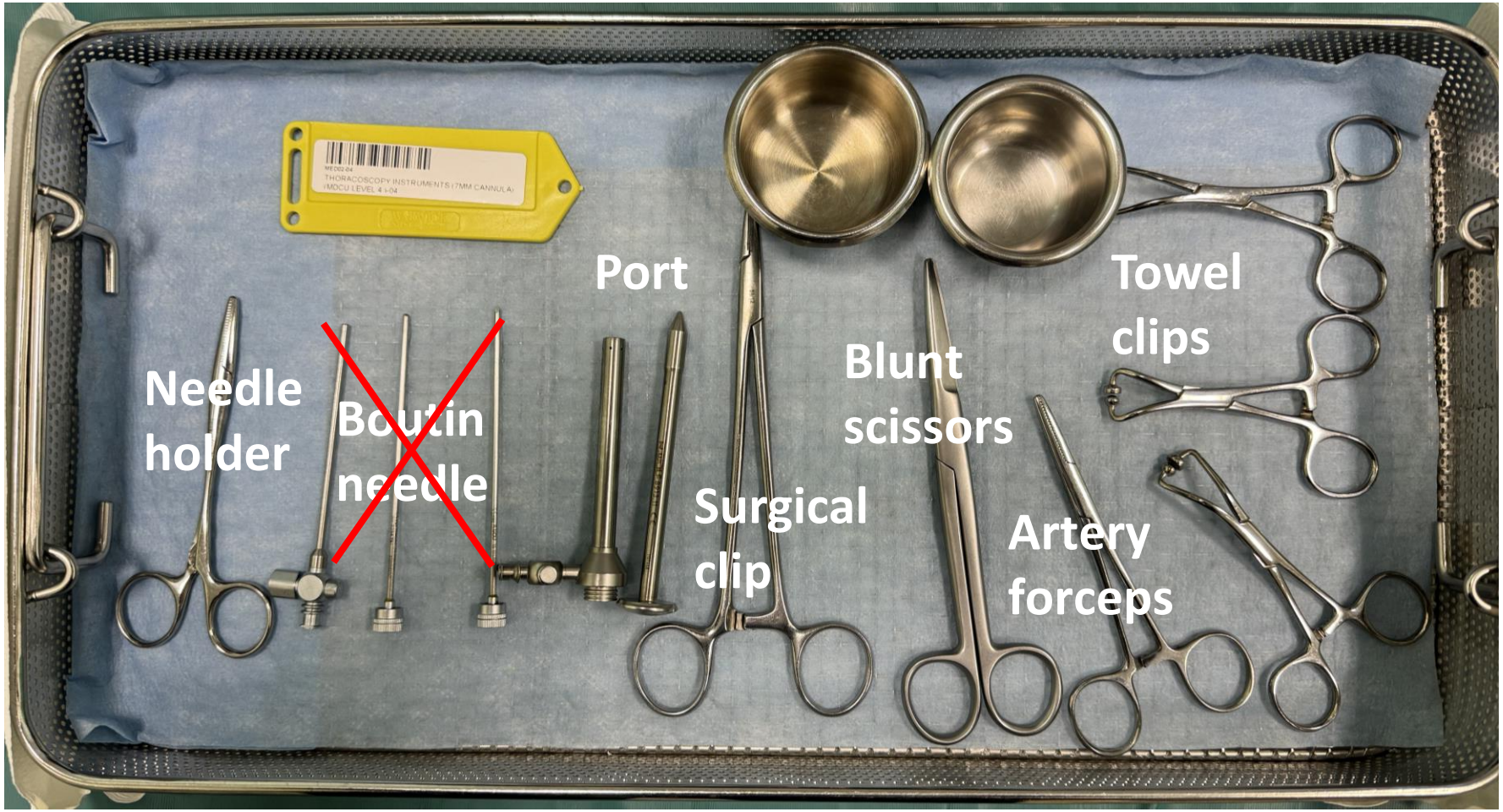
Richard Wolf, 50 degree and 0 degree scopes



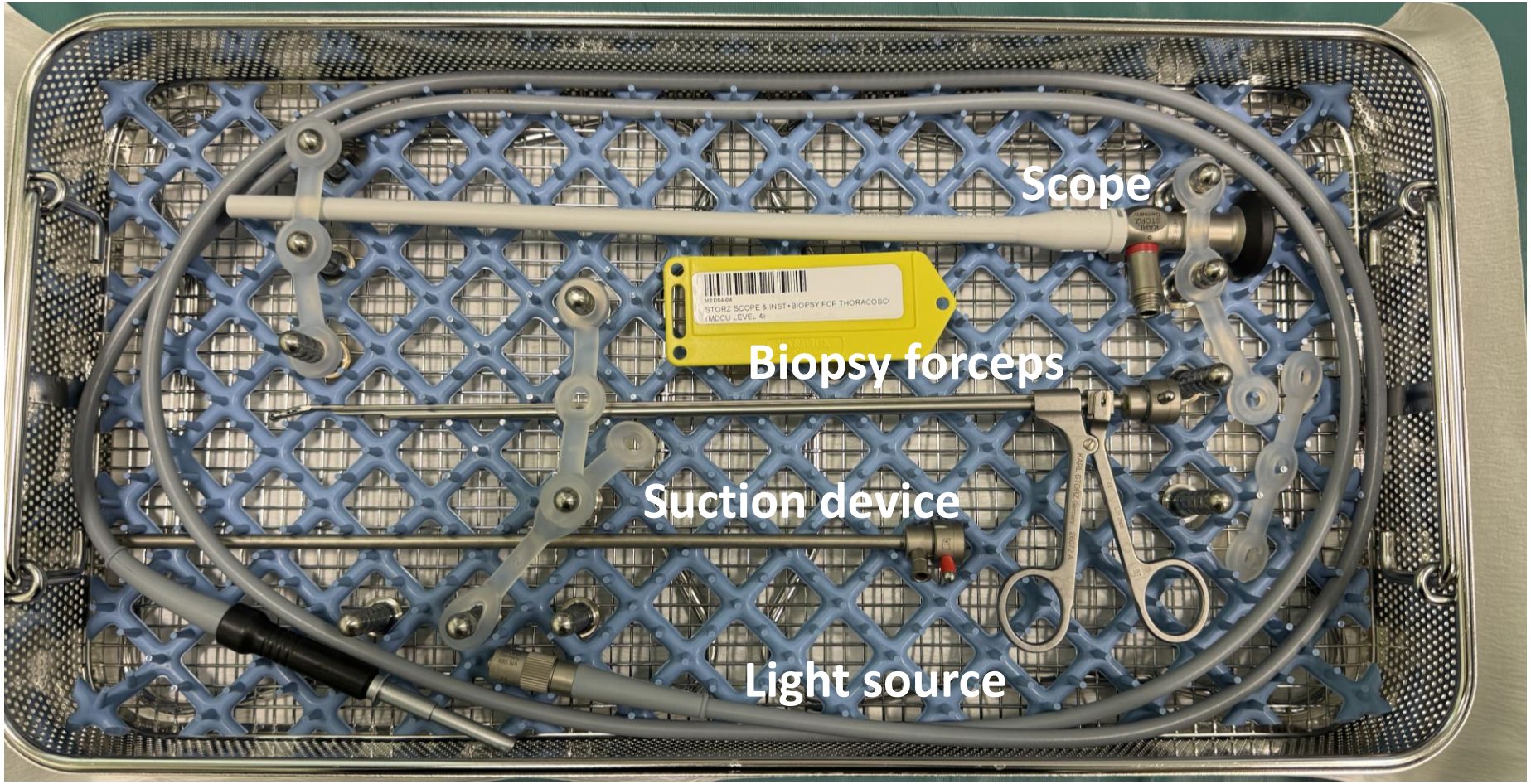
Richard Wolf mini-thoracoscope

Olympus semi-rigid thoracoscope

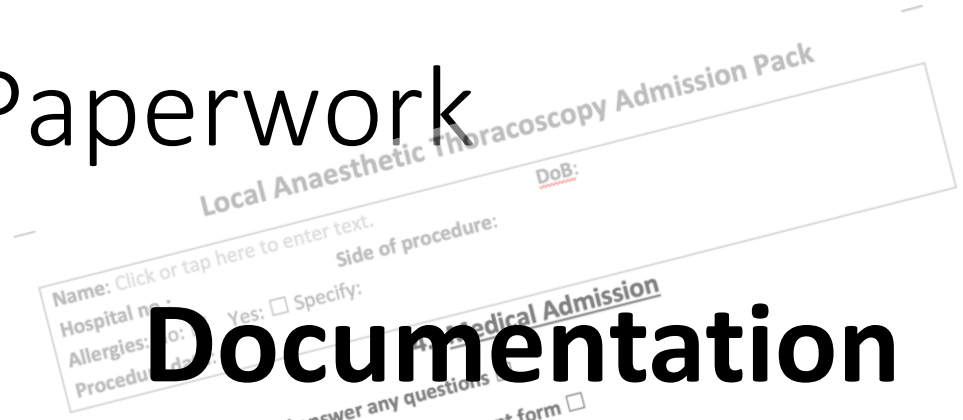
The tools


Needle holder
Boutin needle
Port
Surgical clip
Blunt scissors
Towel clips
Artery forceps

The scopes

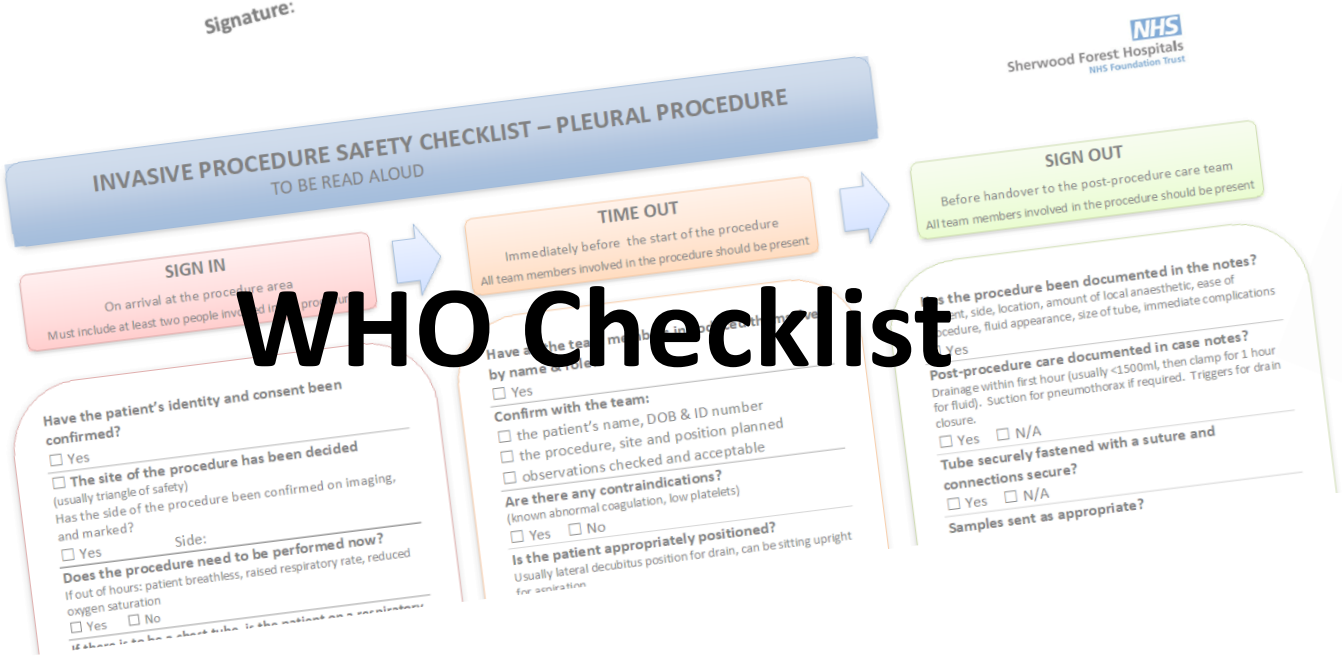


Paperwork

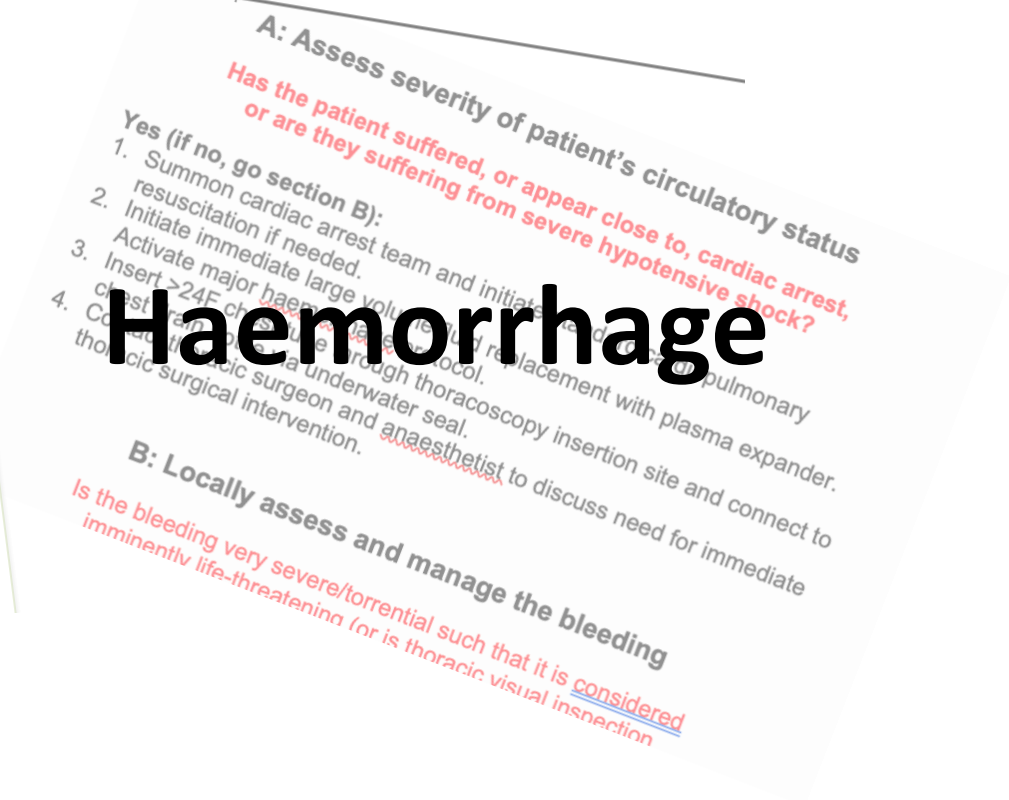


Documentation

Information



WHO Checklist



Haemorrhage

The room


clinell
SonoSite
MY NAME IS WALLY
AND I AM MISSING
FROM
OPAT/MDCU
Level 4
X6826
I am very expensive
and may be lost

Options for the room

- Theatres
- Endoscopy
- Dedicated pleural procedures room
- Room on the ward

Staff

- Theatres
- Endoscopy
- Dedicated respiratory nurses
- Pleural nurse specialists

- How do you train them?

Scheduling

- Regular sessions or ad-hoc
- Impact on bronchoscopy
- Inpatient bed post-procedure

Getting ready for the unexpected

- No/little fluid – ?induce a pneumothorax
- Lung won’t go down
- Benign appearances
- Biopsies not tolerated
- Haemorrhage
- Won’t wake up

Follow-up – options

- Pleural clinic
- Dedicated outpatient slots
- Medical daycase unit
- Pleural nurse

The business case

- Quality of patient experience
- Reduce LoS for ‘undiagnosed’ effusion
- Ambulatory management
- Local data:
  - bed days for pleural effusion diagnsosi
  - number of interventions to get to diagnosis
  - number of external referrals

Cost of the kit

- Rigid kit – Wolf/Storz circa £80k
- Semi-rigid – depends on need for stack. Scope circa £30k

- Bid ready for any circumstances:
  - capital planning
  - end of year surplus
  - charitable fund/League of Friends
  - Cancer Alliance funding

Before the first patient

- ?visit a friendly local provider
- dummy run with whole team and whole kit
- focus on:
  - equipment availability
  - patient access and positioning
  - sterile field
  - operating the kit
  - dealing with complications (bleeds)

When you're ready…

- Big effusion for the first few
- Ideally younger patients, few comorbidities
- Good performance status
- Prognosis >3/12
- Beware anticoagulation/ antiplatelets

Complications

- Mortality 0.3%
- Major complications 1.8%
  - bleed
  - empyema
  - port site or tract metastasis
  - bronchopleural fistula/air leak/’pneumothorax’
  - pneumonia
- Minor complications 7.3%
  - bleeding/hypotension./fever/AF/subcutaneous emphysema/wound infection

KMH experience

- Pleurodesis rate 80%
- Service has adapted over time
  - C19
  - Patient preferences
  - TAPPS/IPC-Plus studies

Conclusion

- Useful tool
- Undiagnosed exudative pleural effusions
- Think about:
  - location
  - staff
  - equipment
  - workup and follow-up
  - complications

Shameless plugs

- UK Thoracoscopy Course 2025, 24 April 2025 at King’s Mill Hospital
- Access to documentation
- www.pleura.uk

UK Pleural Society