

The challenge of delivering specialist cancer surgery (low volume complex)

in the NCA (Scotland)

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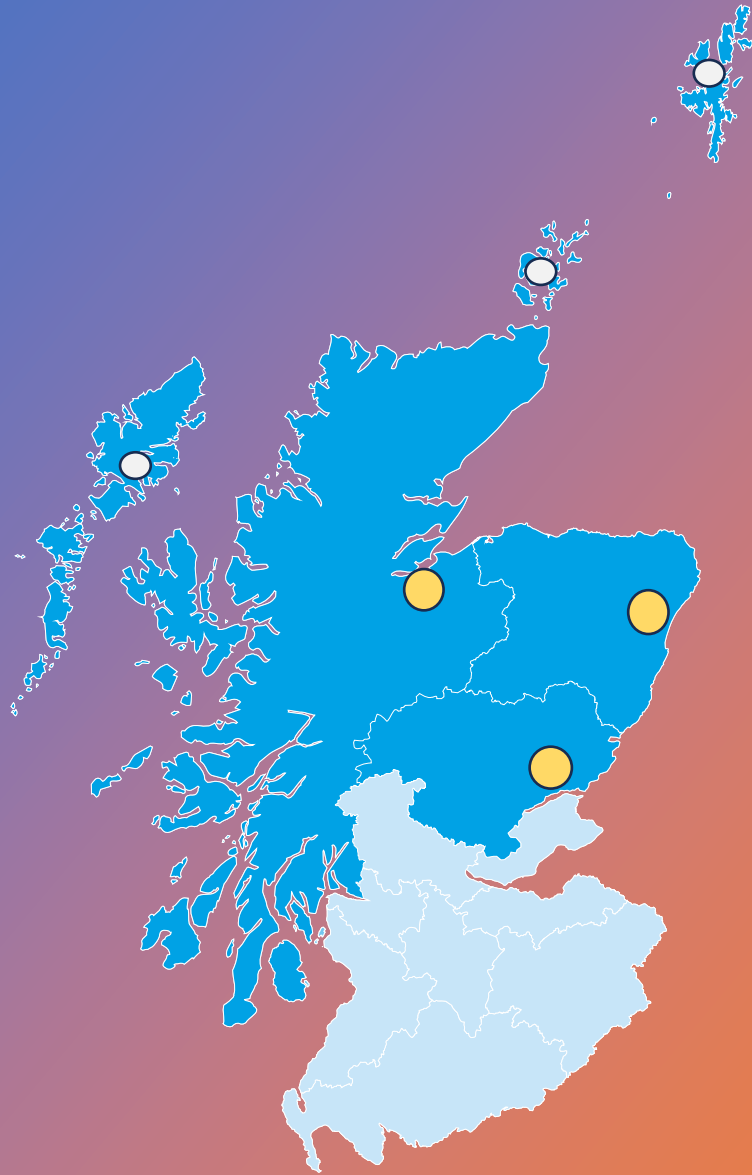
SCN National Meeting, 8 March 2024

'Less survivable cancers'.....

- Pancreas
- Liver
- Oesophagus
- Stomach
- Lung
- Adult neuro-oncology

Surgery for these cancer patients is complex, highly specialised and high-risk surgery!!

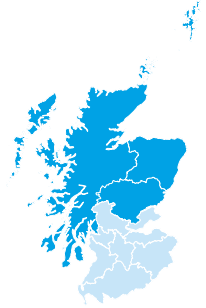




North Cancer Alliance

- 3 mainland HBs & 3 Island HBs
- 1.4 million population
- Wide geography / remote & rural
- 3 'university teaching' hospitals
- All 3 provide similar cancer surgery services for most cancer types
- Lung Ca surgery - NHSG

Is this the 'optimal delivery model' for a low volume cancer service.....?



- Surgery close to home – convenient for patient & family
- Retains surgical skills and cancer surgery service within each small hospital

But.....

- Small numbers (volumes) of complex cases per hospital : 0-20 cases per year
- Inexperienced support teams and surgeons : <2 cases per month

**Does this compromise early post operative patient outcomes
& longer-term cancer survival rates ?**

Special Article

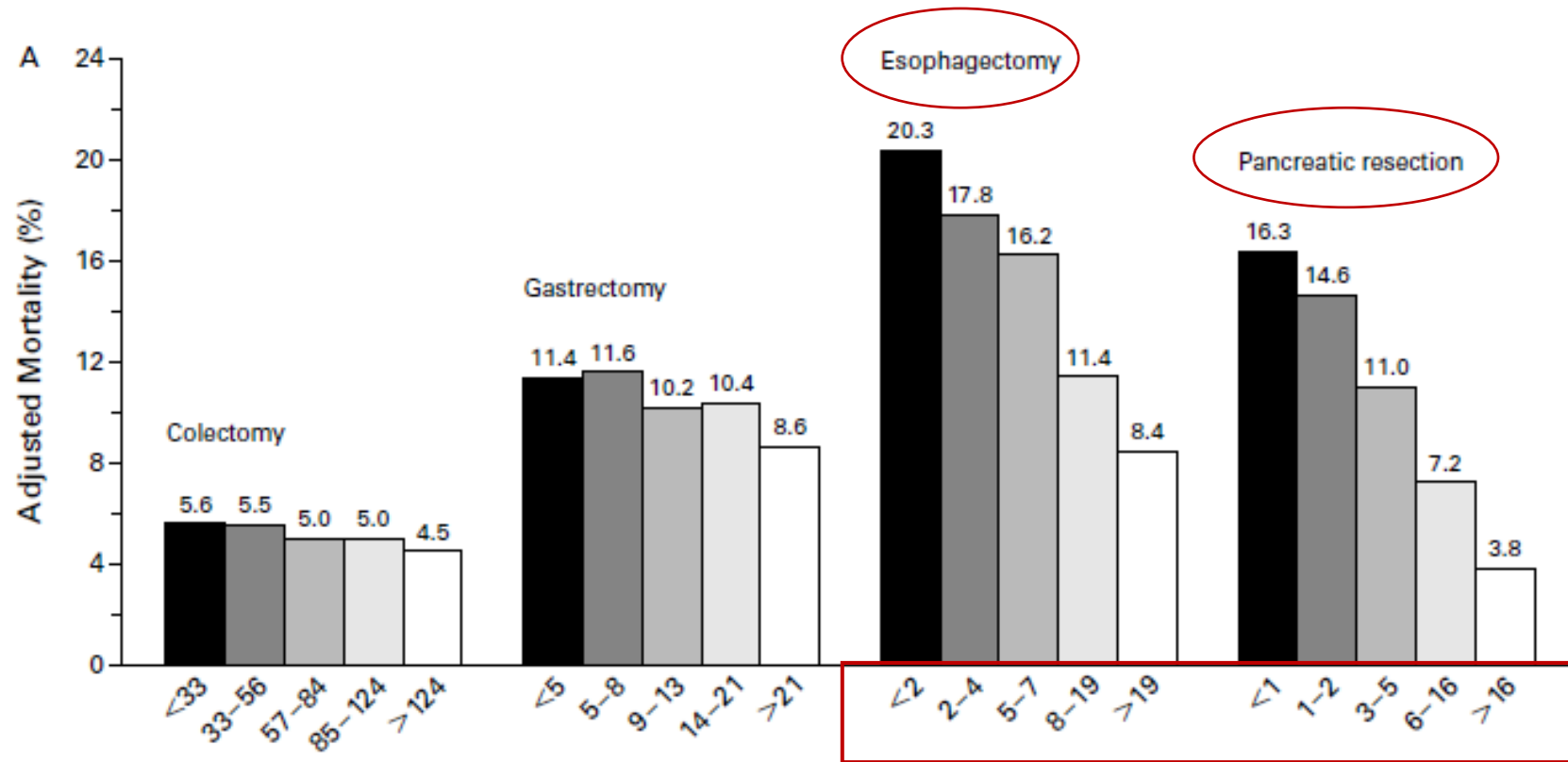
HOSPITAL VOLUME AND SURGICAL MORTALITY IN THE UNITED STATES

JOHN D. BIRKMEYER, M.D., ANDREA E. SIEWERS, M.P.H., EMILY V.A. FINLAYSON, M.D., THERESE A. STUKEL, PH.D.,
F. LEE LUCAS, PH.D., IDA BATISTA, B.A., H. GILBERT WELCH, M.D., M.P.H., AND DAVID E. WENNBURG, M.D., M.P.H.

2.5 million Medicare patients : 14 types operation – 8 cancer operations : 1994-1999

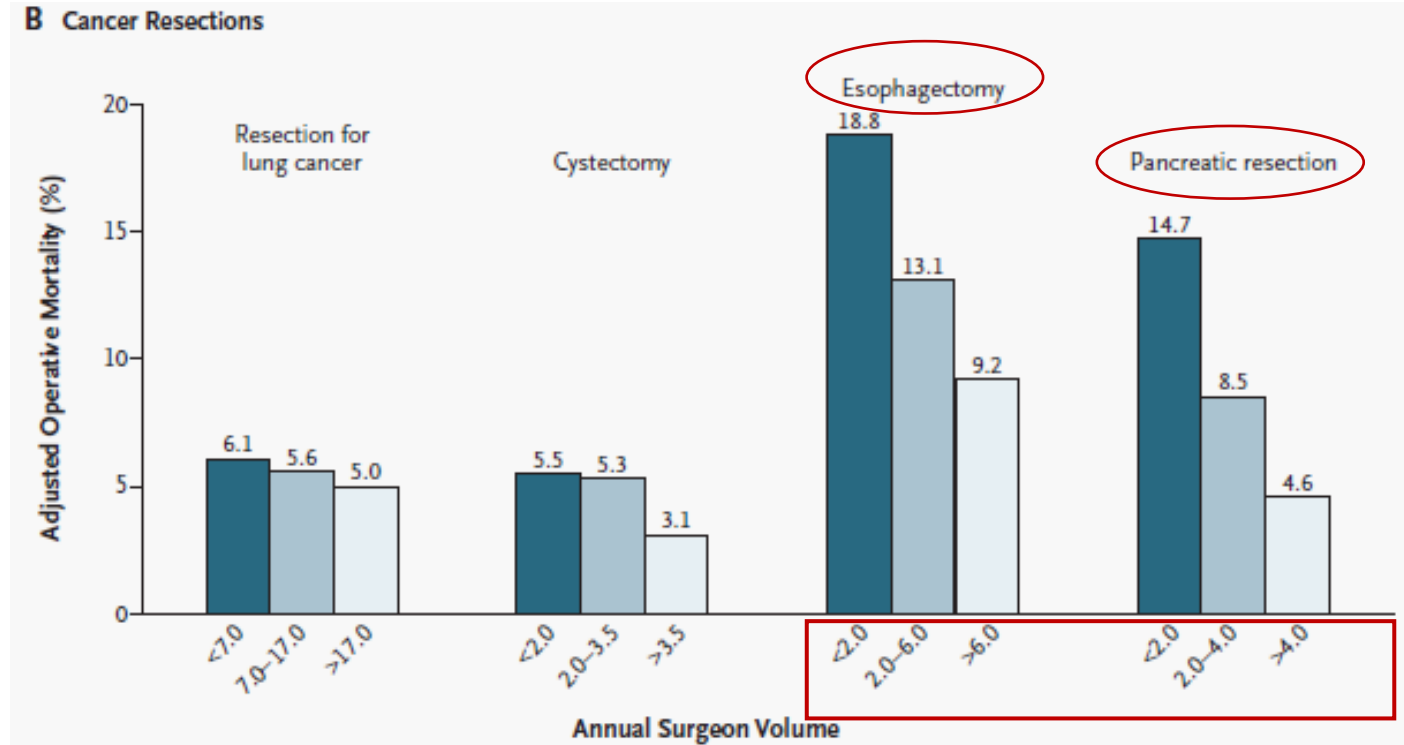
Number operations performed per hospital divided into volume quintiles
(5 groups : very low, low, medium, high, very high)

6,350 oesophagectomy : 10,530 pancreatectomy patients



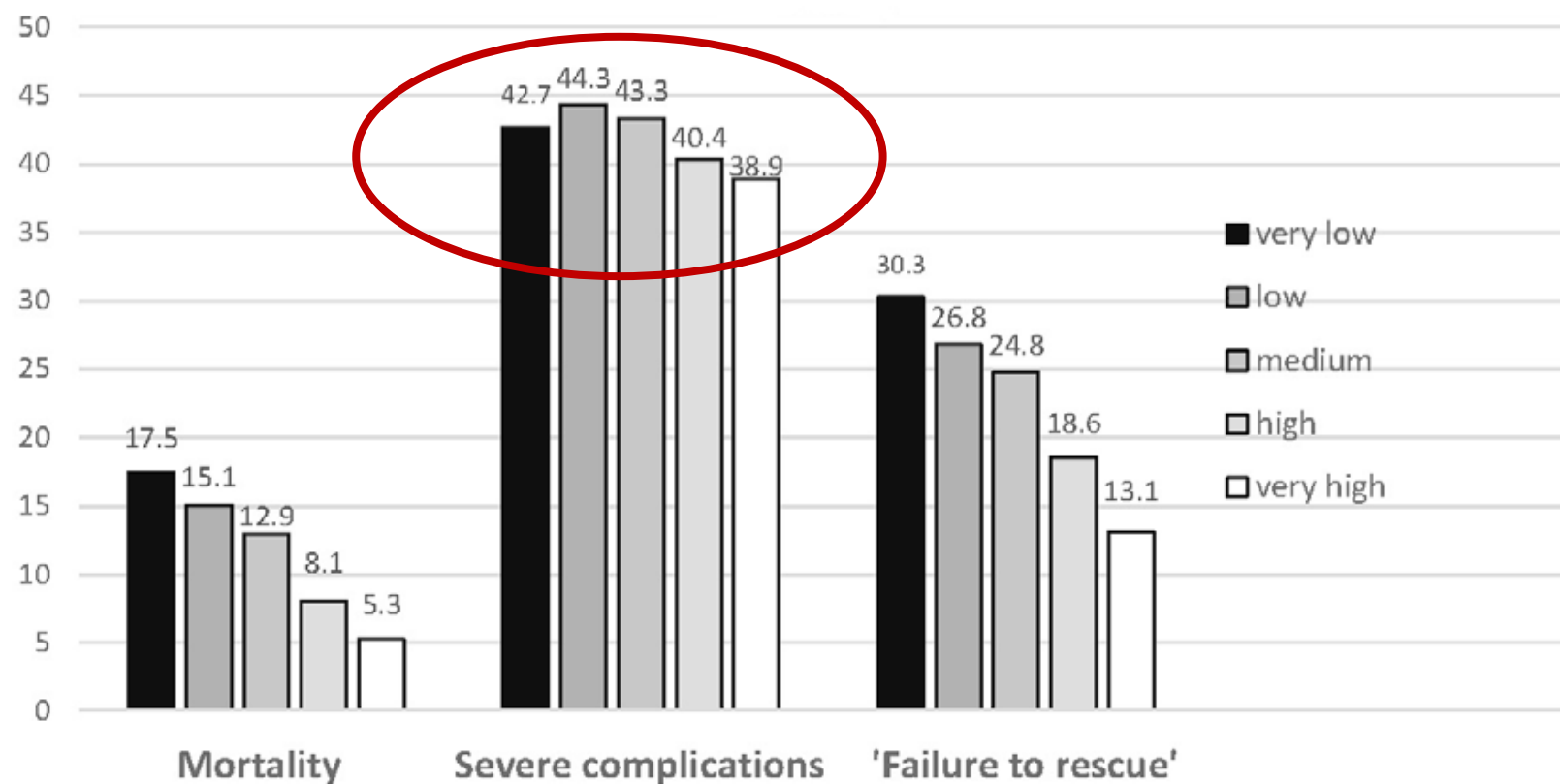
Surgeon Volume and Operative Mortality in the United States

N ENGL J MED 349:22 WWW.NEJM.ORG NOVEMBER 27, 2003



Minimum Volume Standards in Surgery – Are We There Yet?

Fig. 5. ‘Failure to rescue’* correlates with mortality and clinic case number, while the frequency of severe complications in case groups is hardly different (modified from [46]) (*death after severe complications that have been discovered/treated too late/inadequately).



Safety in Numbers: Hospital Performance on Leapfrog's Surgical Volume Standard Based on Results of the 2019 Leapfrog Hospital Survey

Hospitals and surgeons should perform a minimum volume of a given procedure per year to ensure the safest outcomes for their patients

Table 1: Leapfrog's facility and surgeon privileging volume standards

Procedure	Minimum annual hospital volume standard	Minimum annual surgeon volume standard for privileging
Bariatric surgery for weight loss	50	20
Carotid endarterectomy	20	20
Esophageal resection for cancer	20	7
Lung resection for cancer	40	15
Open aortic procedures	10	7
Mitral valve repair and replacement	40	20
Pancreatic resection for cancer	20	10
Rectal cancer surgery	16	6

Guidelines Min Vols
Surgical societies Europe:

Netherlands
Germany
Norway
Sweden
Denmark
England

What drives centralisation in cancer care?

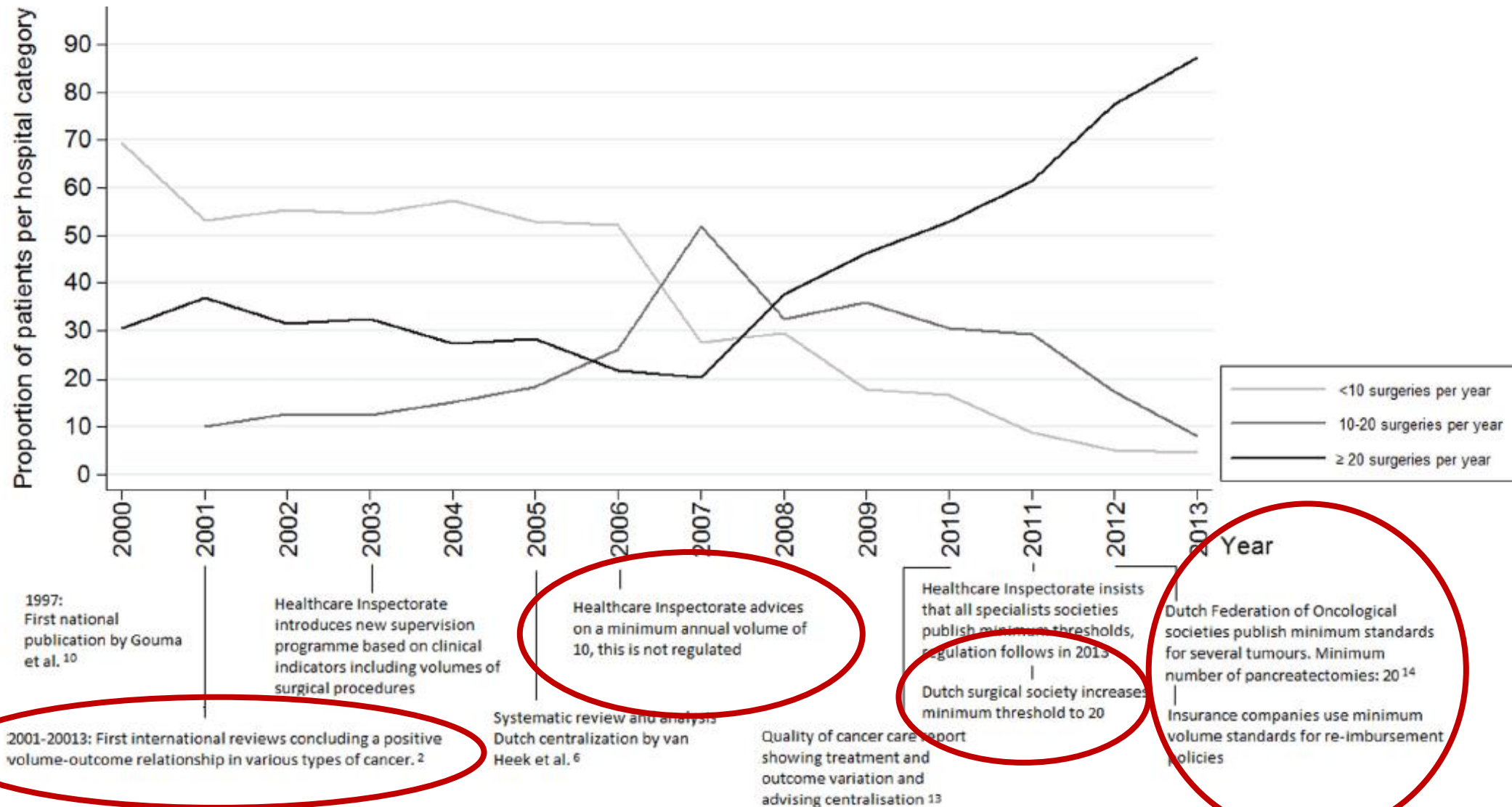
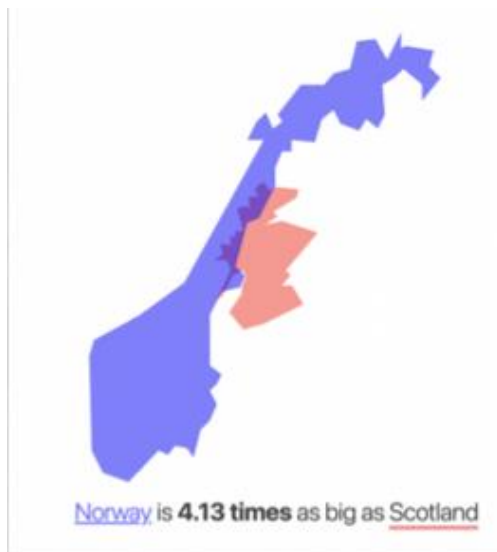
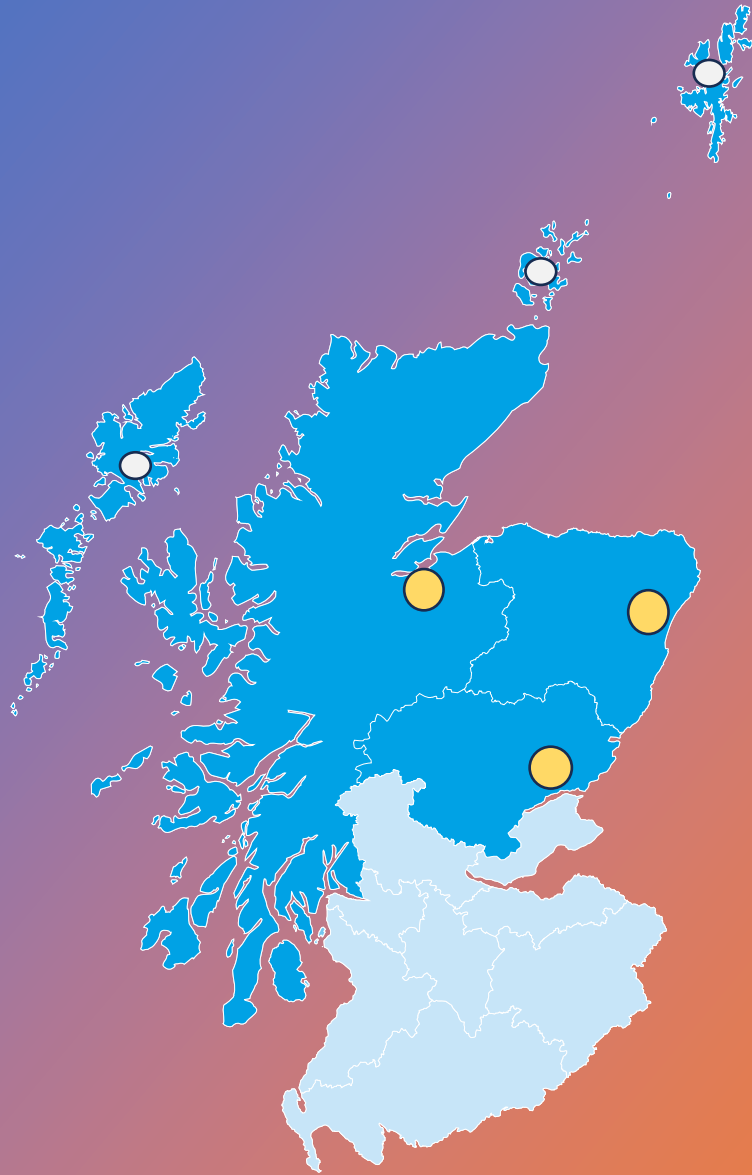


Fig 3. Changes in surgical volumes from 2000–2013: Pancreas resections and relevant external stimuli. Significant trendbreak in 2006 (for cumulative categories ≥ 10 and ≥ 20 procedures).

NCA region – Remote & rural - low population density



All three countries are amongst 'Highest ranked' for cancer performance & survival outcomes in Europe



NCA – GIRFTN, 2021

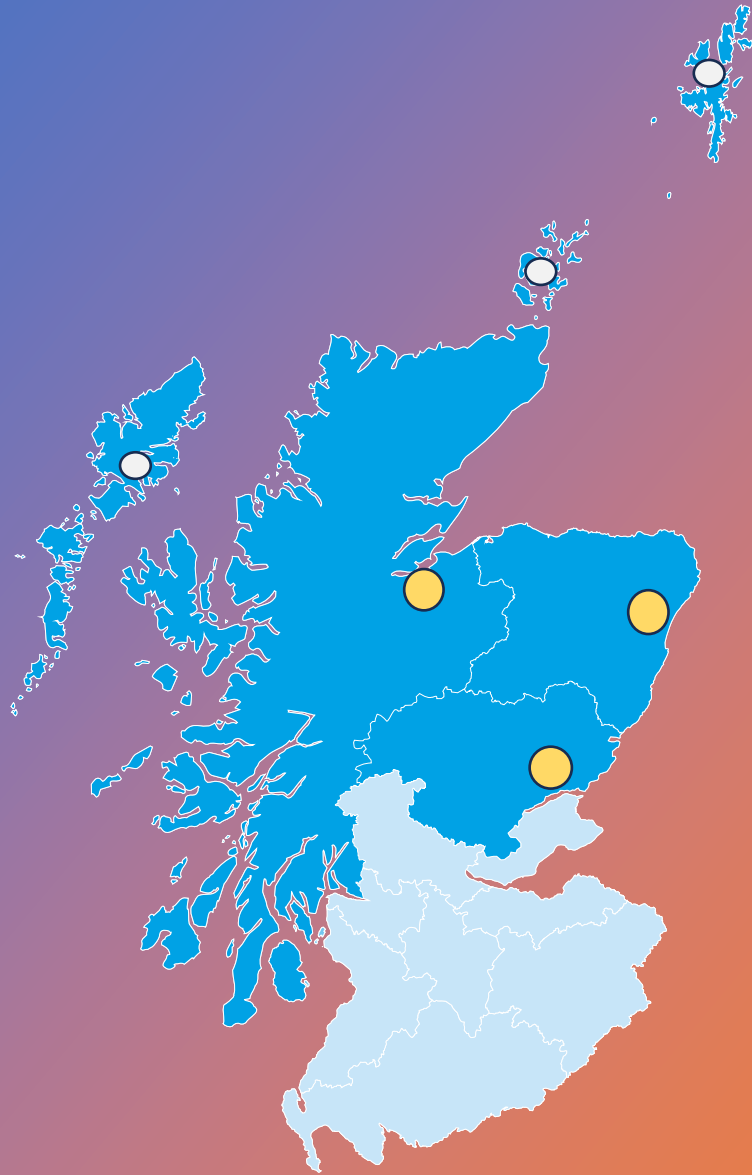
Opportunities for LVC cancer services

? Single regional cancer MDTs -
shared decision making and treatment planning

? Single sites for complex cancer surgery :
Volume-outcome & survival gains

Collaboration and networked team support :
Wider regional (national cancer) services

The ~~challenge~~ of
opportunity to enhance
specialist cancer surgery
in the NCA
(Scotland)



North Cancer Alliance Challenges....

- Staff working across HB boundaries
- Clinical governance / HB autonomy
- Organizational / Reputational harm
- Retention & Recruitment of staff
- Lack of financial resources