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Monitoring Diagnosis and Treatment of Screen-Detected Breast Cancer in the NHSBSP

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ICSN 2008

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Monitoring Screening: Principles

- Maintenance of minimum standards, continual striving for excellence
- Data items to drop out of clinical record: no special items
- Extensive reporting back to individual units with regional and national comparisons
- Performance indicators can be interrogated
- All women included, all units must submit complete records
  - 6 month time elapse before data requested

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Monitoring Diagnosis

- Standardised Detection Ratio (observed cancers/expected cancers)
- Cancer Detection Rate (invasive/in situ)
- Small Invasive Cancer Rate (<15 mm)
- Image Quality
- Radiation Dose
- Repeat Film Rate
- Assessment Rate
- Non-operative Diagnosis Rate
- Benign Biopsy Rate
- Interval Cancer Rate (long term outcome)

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Examples of initial standards set for the prevalent (first) round of screening for women aged 50-64

Objective	Measurement	Minimum acceptable standard	Target standard
Maximise the number of cancers detected	No of cancers detected in women invited and screened	>3.5 in 1000	>5 in 1000
Minimise the number of women referred unnecessarily for further tests	No of women referred for assessment	<10% of women screened	<7% of women screened

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Prevalent screen standardised detection ratio for the 40 largest screening units in England ranked in ascending order for 1990-1, 1996-7, and 2002-3
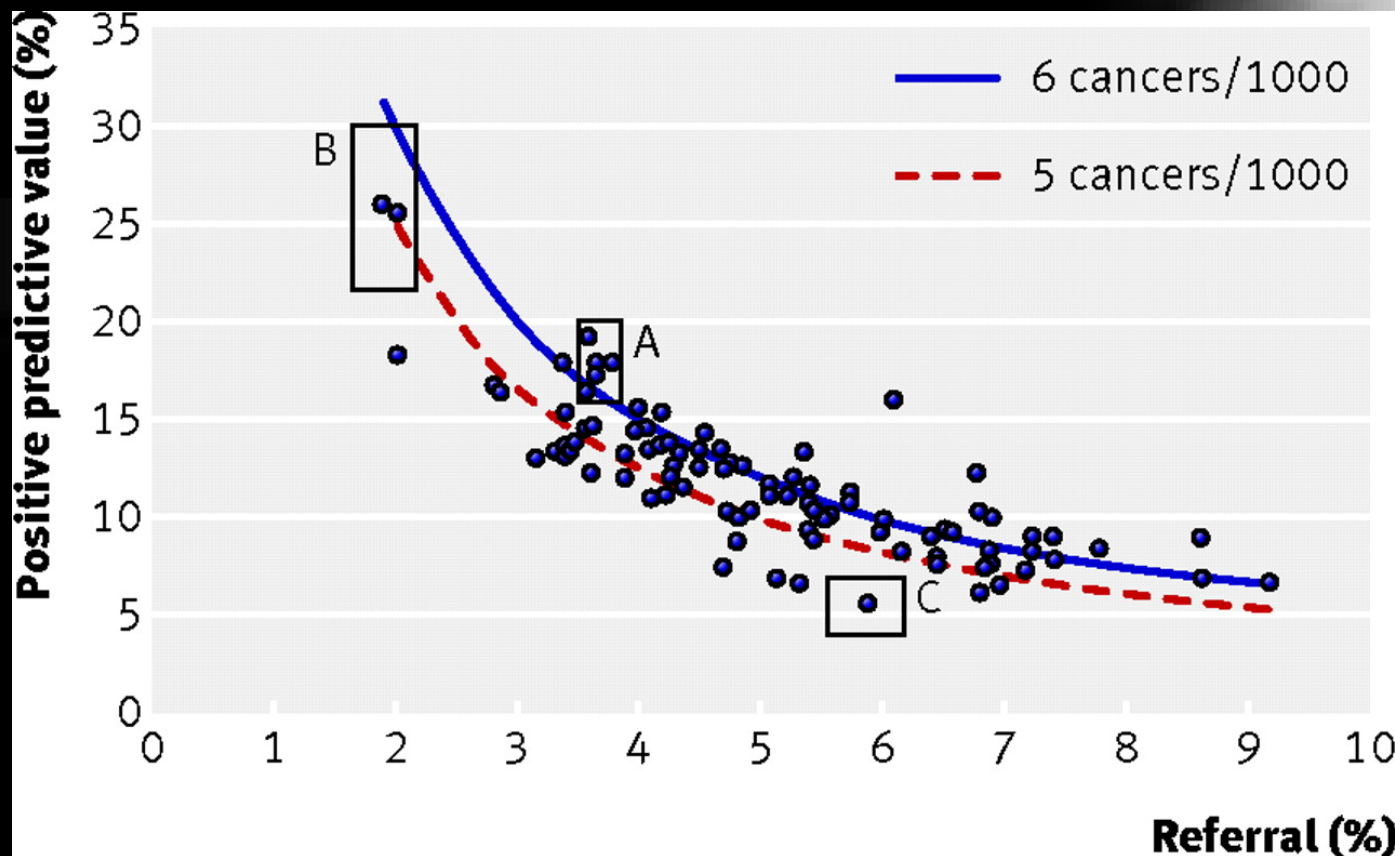

Gray, Patnick, Blanks BMJ 2008;336:480-483

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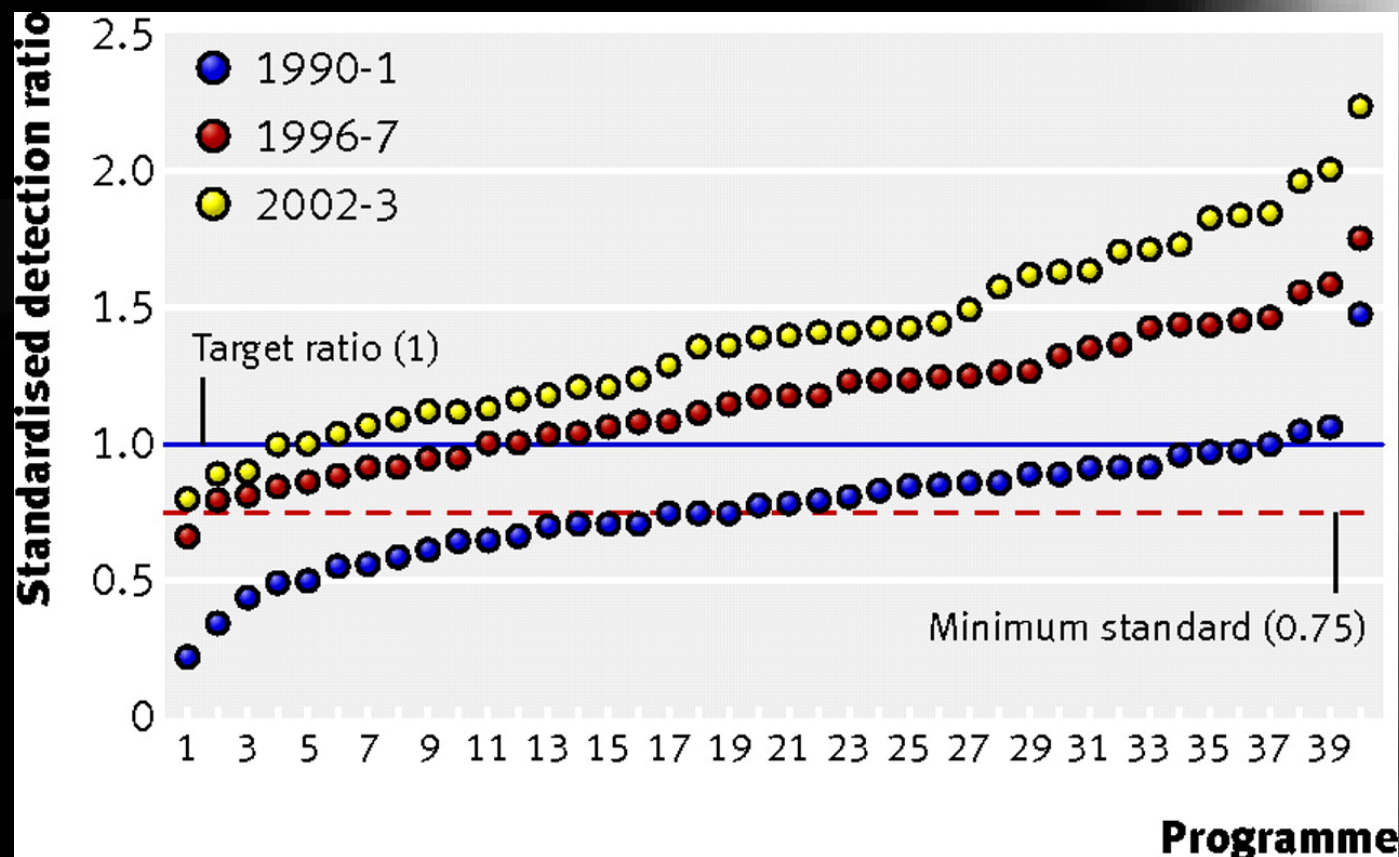
Rate of recall for assessment at incident screening and positive predictive value of recall

Gray, Patnick, Blanks BMJ 2008;336:480-483

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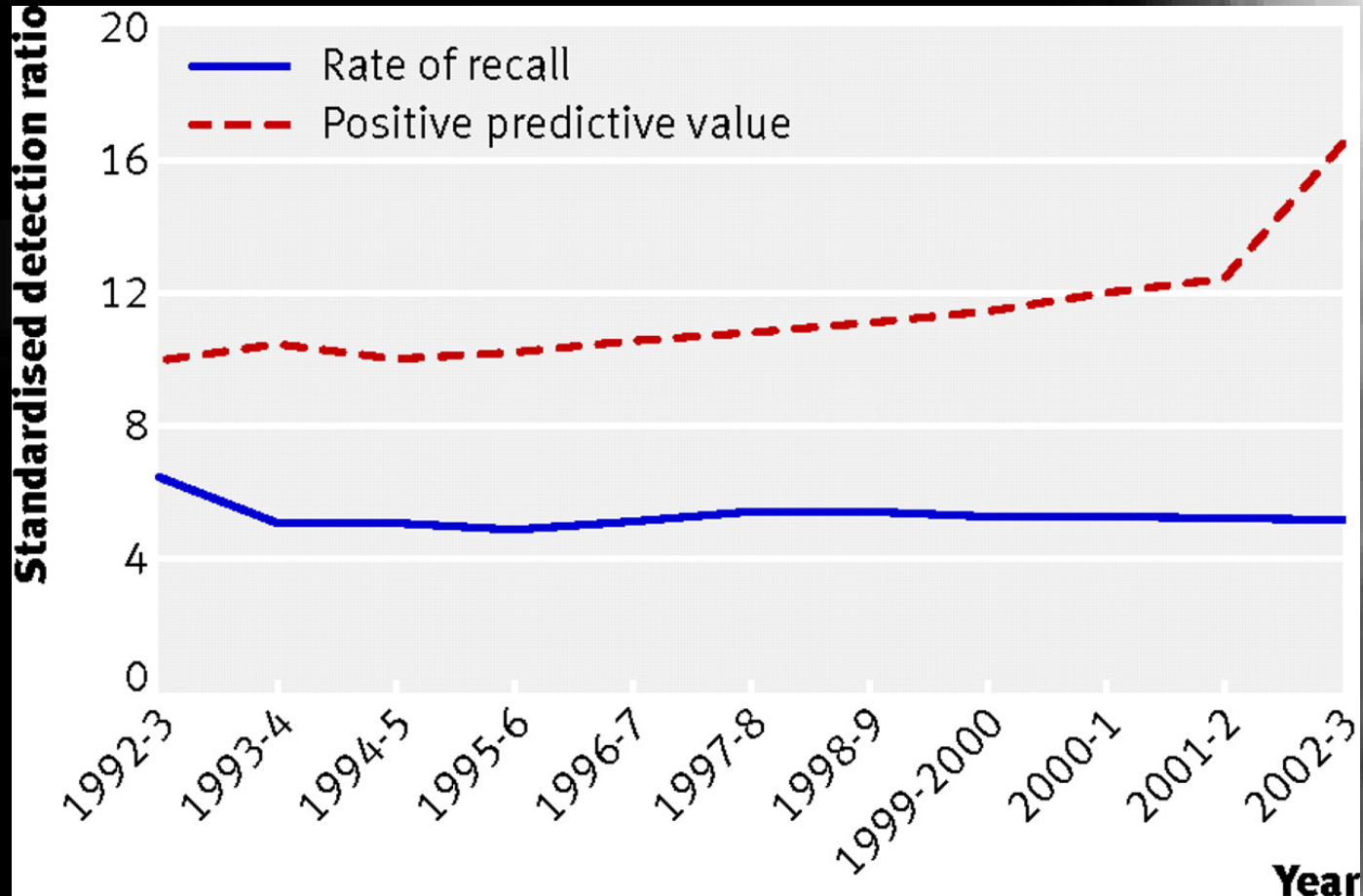
Positive predictive value of recall versus recall for assessment for all 95 UK screening units 1999-2000 (women aged 50-64). Boxes A-C highlight three example units plus 90% confidence intervals, with box A showing a unit with optimal qualities of high positive predictive value and cancer detection rates but low referral rate

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Effect of different protocols on standardised detection ratio (SDR) for small invasive breast cancers (<15 mm)

Protocol	SDR	Rate ratio (95%CI)
One view/single reading	0.68	1.00
One view/double reading (recall if one reader suggests)	0.93	1.37 (1.15 to 1.62)
Two views/single reading	0.97	1.43 (1.15 to 1.77)
One view/double reading (consensus)	1.00	1.47 (1.21 to 1.78)
Two views/double reading (recall if one reader suggests)	1.05	1.54 (1.26 to 1.87)
Two views/double reading (consensus)	1.12	1.64 (1.31 to 2.06)
One view/double reading with arbitration)	1.18	1.73 (1.40 to 2.13)
Two views/double reading with arbitration	1.28	1.88 (1.49 to 2.37)

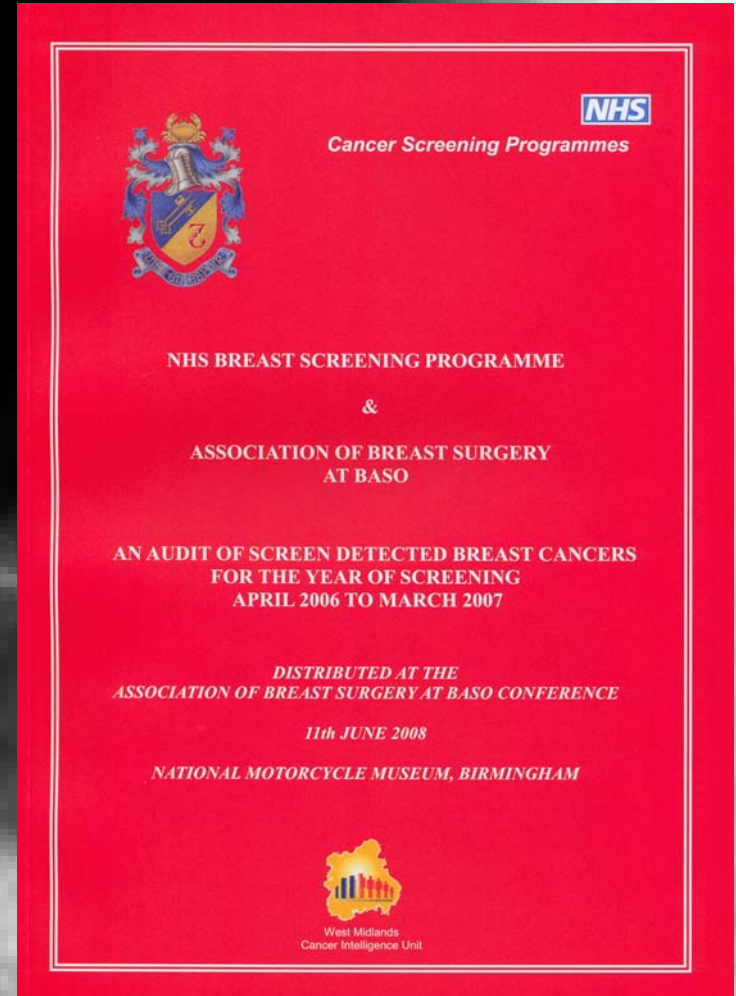Blanks, Wallis, Moss J Med Screen 1998

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Monitoring Treatment: Principles

- Outside screening programme, so must get cooperation of others
- No new data items, use clinical record
- Extensive reporting back to individual units with regional and national comparisons

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NHS BREAST SCREENING PROGRAMME

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ASSOCIATION OF BREAST SURGERY AT BASO

AN AUDIT OF SCREEN DETECTED BREAST CANCERS FOR THE YEAR OF SCREENING APRIL 2006 TO MARCH 2007

DISTRIBUTED AT THE ASSOCIATION OF BREAST SURGERY AT BASO CONFERENCE

11th JUNE 2008

NATIONAL MOTORCYCLE MUSEUM, BIRMINGHAM

West Midlands
Cancer Intelligence Unit

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Monitoring Treatment: Data Items

- Cancers (invasive vs in situ)
- Non-operative diagnosis (accuracy)
- Surgical treatment (conservation vs mastectomy)
- Lymph nodes (status, number, procedure etc)
- Waiting times
- Surgical caseload
- Number of operations
- Adjuvant therapy
- Survival

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National Analysis of Individual Unit Data: Non-Operative Diagnosis

units

%

Legend: non invasive ▢ invasive ▮

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National Analysis of Individual Unit Data: Non-Operative Diagnosis

units

Legend: ☐ b5b% ☐ total
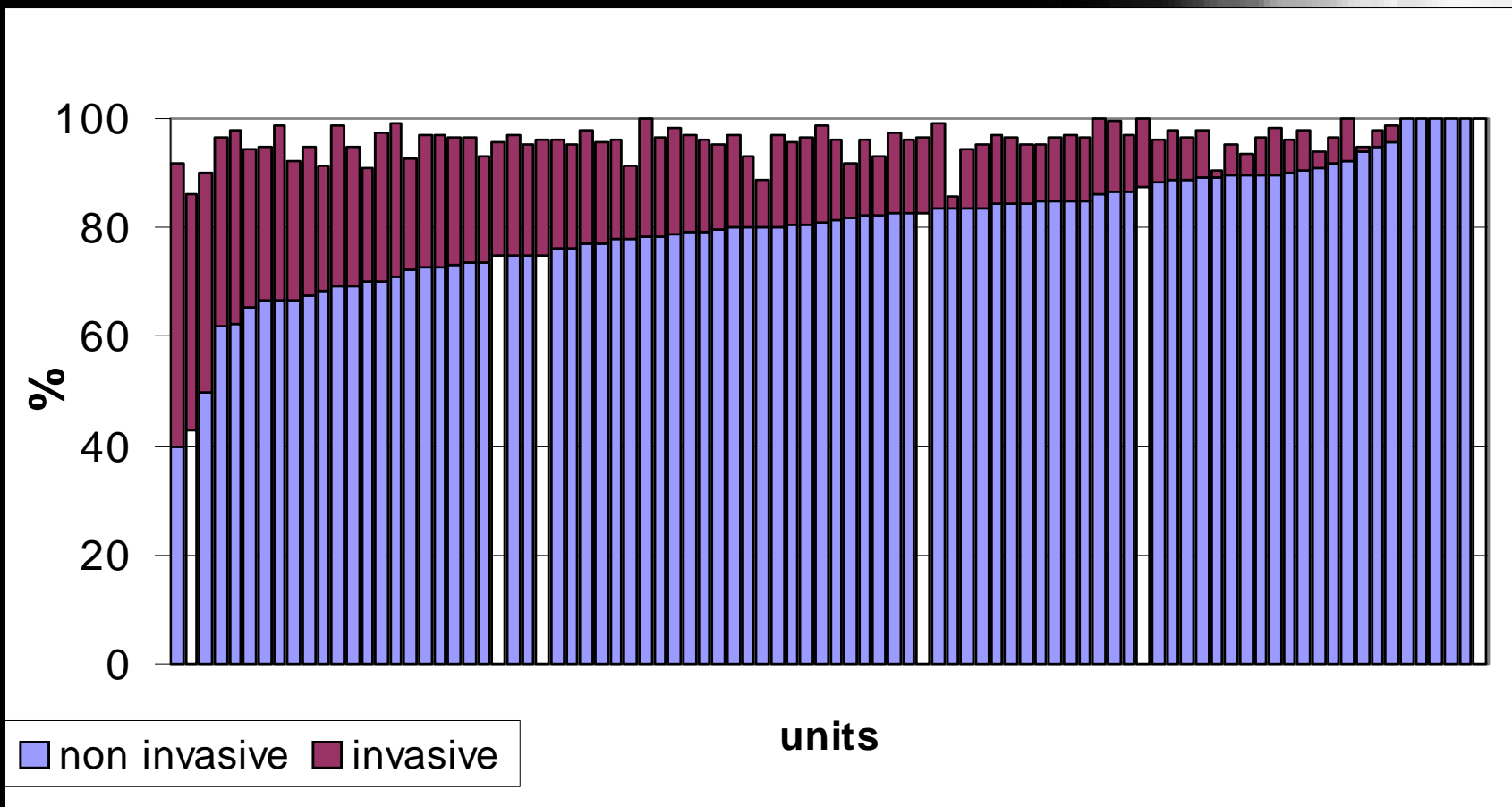
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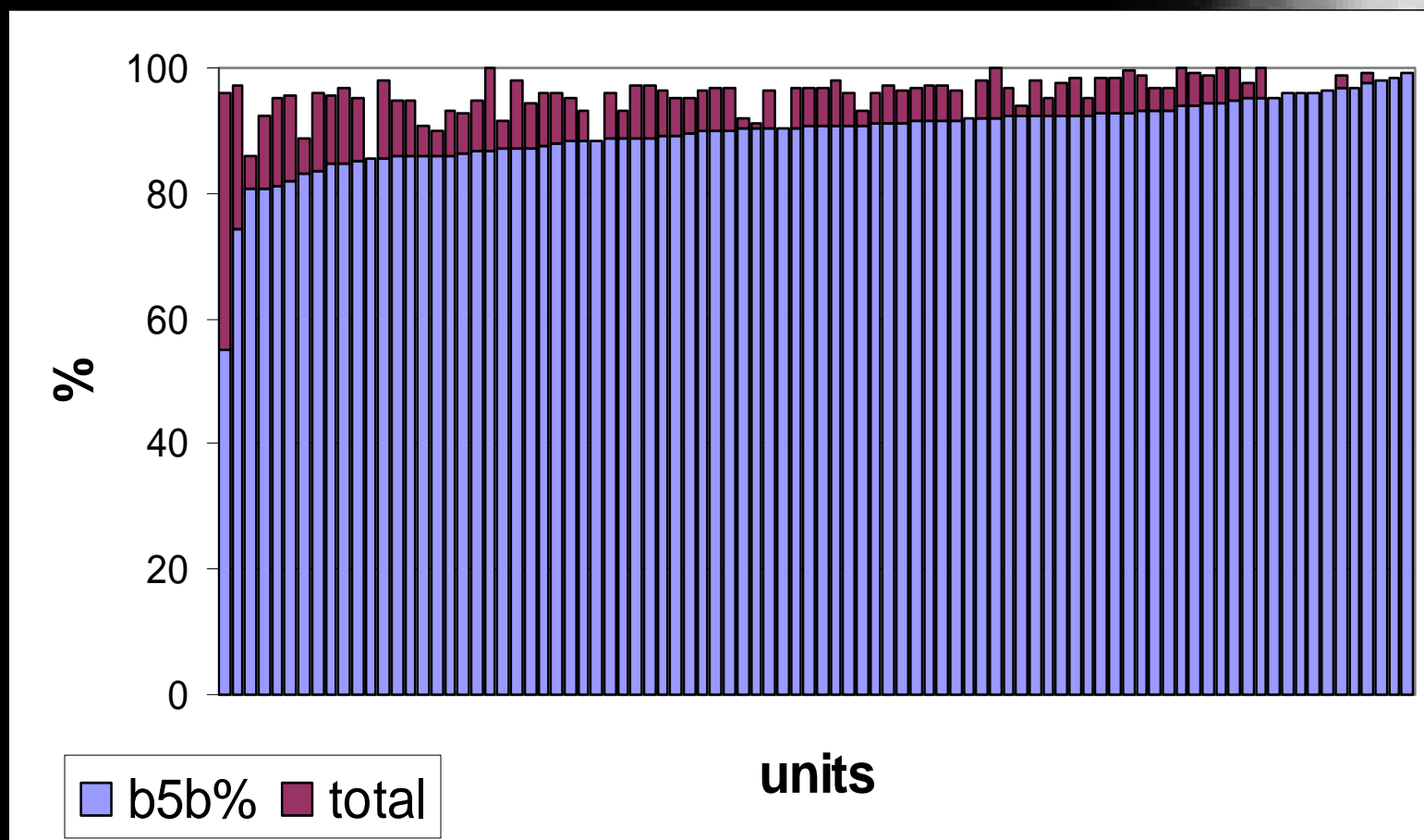
Rates of non-operative diagnosis for screening programme (minimum standard 70%, target standard ≥ 90%)

Year	Women with non-operative diagnosis (%)	Regions meeting minimum standard (%)	No (%) regions meeting target
1997/8	71	68	0
1998/9	81	100	1 (7)
1999/ 2000	85	100	1 (10)
2000-1	87	100	2 (15)
2001-2	89	100	6 (45)

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Conclusions

- Detailed monitoring of diagnosis and treatment is possible

- Feedback and "added value" to those submitting data is vital

- Cooperation and goodwill is essential for collection of treatment data in particular

- NCIN offers the opportunity to do this across all cancer services

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Thanks for listening

www.cancerscreening.nhs.uk

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