National breast screening pathology audit

Results for 1st April 2020 to 31st March 2023

NHS England

Key messages

- Many pathologists/labs still doing small number of cases
- NBSS has limitations around multiple foci (progress made with recording of VAE separately)
- Concerns around data accuracy – B3 with/without atypia
- If you/your unit/lab is an outlier, make sure to look at it.

This national pathology audit should be read in conjunction with the following:

- Document to support the interpretation of the national breast screening pathology audit (November 2024 V1.0)
- The national pathology audit data tables (2020-2023)

BQA Results by client and by tests

Reporting at the laboratory or service level (clients)

Client level data collates all the pathology samples that an individual client had and considers the most significant biopsy result. This outcome is then compared with the subsequent histology from VAE or surgery. If a patient has lesions in both breasts these are counted as two clients. All client data are used for pathology KPIs.

Reporting at the individual pathologist level (tests)

The number of tests is expected to be greater than the number of clients because some lesions will have more than one biopsy taken. Test level data gives the outcome for all biopsies for each lesion.

Challenges of data collection

- If multiple lesions in the same breast, NBSS not able to map the different lesions.
- If 1 lesion is B3 and 2nd B5b, it can't automatically separate these 2 and may link them.
- Concerns around some of the B3 with/without atypia figures

Breast screening services

	Unit code	Unit Name
East Midlands	CDN	North Derbyshire & Chesterfield
	CDS	South Derbyshire & South East Staffordshire
	CLE	Leicestershire
	CLI	Lincolnshire
	CNN	North Nottinghamshire
	CNO	Nottingham City
	KKE	Kettering
	KMK	Milton Keynes
	KNN	Northampton
East of England	DCB	Cambs & Hunts
	DGY	Great Yarmouth & Waveney
	DKL	King's Lynn
	DNF	Norfolk & Norwich
	DPT	Peterborough
	DSU	East Suffolk
	DSW	West Suffolk
	ELD	Beds & Herts
	FCO	Chelmsford & Colchester
	FEP	West Essex (Epping)
	FSO	South Essex
West Midlands	MBS	South Birmingham
	MBD	City, Sandwell & Walsall
	MCO	Warwickshire, Solihull & Coventry
	MDU	Dudley, Wolverhampton and South West Staffordshire
	MHW	Hereford & Worcester
	MSH	Shropshire
	MST	North Midlands

	Unit code	Unit Name
North East, Yorkshire & Humber	AGA	Gateshead
	ANE	Newcastle
	ANT	North Tees
	AWC	North Cumbria
	BHL	Humberside
	BHU	Pennine
	BLE	Leeds Wakefield
	BYO	North Yorkshire
	CBA	Barnsley
	CDO	Doncaster
	CRO	Rotherham
	CSH	Sheffield
North West	NLI	Liverpool
	NMA	Cheshire & Stockport
	NWA	Warrington, Halton, St Helens & Knowsley
	NWI	Wirral
	PBO	Bolton
	PLE	East Lancashire
	PLN	North Lancashire & South Cumbria
	PMA	Manchester
	PWI	South Lancashire

	Unit code	Unit Name
London	EBA	North London
	ECX	West London
	FBH	Outer North East London
	FLO	Central and East London
	GCA	South East London
	HWA	South West London

	Unit code	Unit Name
South East	GBR	Brighton
	GCT1	Canterbury
	GCT2	Maidstone
	GCT3	Medway
	HGU	Guildford
	HWO	Worthing
	JBA	North & Mid Hampshire
	JIW	Isle of Wight
	JPO	Portsmouth
	KHW	Aylesbury & Wycombe
	KOX	Oxfordshire
	KRG	West Berkshire
	KWI	East Berkshire
South West	JDO	Dorset
	JSO	Southampton & Salisbury
	JSW	Wiltshire
	LAV	Avon
	LCO	Cornwall
	LED	North & East Devon
	LGL	Gloucestershire
	LPL	West Devon
	LSO	Somerset
	LTB	South Devon

Laboratories

85 labs reported 30+ clients

409 pathologists reported 30+ tests

Exclude 50 labs and 4 generic/ unknown lab codes with <30 clients

Exclude 192 pathologists and 9 generic/unknown pathologist codes with <30 tests

Included laboratories with 30+ clients reported 99.79% of total core biopsy clients

Included pathologists with 30+ tests reported 99.01% of total core biopsy tests

	Lab code	Laboratory	Biopsies (clients)
London	EBA-RF	Royal Free Hospital	3,094
	HWA	St George's Hospital	2,463
	GCA	Kings College Hospital	2,067
	ECX	Charing Cross Hospital	1,697
	FLO	Royal London Hospital	1,373
	FBH	Queen's Hospital	1,239
Midlands & East (EofE)	ELD	Luton and Dunstable Hospital	2,497
	DNF	Cotman Centre, Norwich	1,534
	DCB	Addenbrookes Hospital	1,203
	FSO	Southend University Hospital	1,128
	DPT	Peterborough City Hospital	627
	DSU	Ipswich Hospital	502
	FEP	Princess Alexandra Hospital, Harlow	497
	DSW	West Suffolk Hospital	492
	FCO-B	Broomfield Hospital	447
	FCO-C	Colchester General Hospital	405
Midlands & East (EM)	CLE	Glenfield Hospital	1,923
	CDS	Royal Derby Hospital	1,735
	CNO	Nottingham City Hospital	941
	CDN	Chesterfield Royal Hospital	804
	KKE	Kettering General Hospital	623
	CNN	Kings Mill Hospital	539
	KNN-B	Backlogs	418
	KMK	Milton Keynes Hospital	407
	KNN-N	Northampton General Hospital	168
EM/NE	CLI	Lincoln County Hospital	1,538
Midlands & East (WM)	MDU-NW	New Cross Hospital (Royal Wolverhampton)	1,802
	MHW-W	Worcestershire Royal Hospital	1,148
	MCO-C	University Hospital Coventry & Warwickshire (UHCW)	1,085
	MBD-C	Birmingham City Hospital	947
	MSH	Royal Shrewsbury Hospital	894
	MBS	Queen Elizabeth Hospital Birmingham	891
	MCO-W	Warwick Hospital	779
	MCO-H	Heartlands Hospital	497
	MHW-H	Hereford County Hospital	226
	MDU-RH	Russell's Hall Hospital, Dudley	110
WM/NW	MST	Royal Stoke University Hospital (UHNM)	2,823
North (NE)	BLE	St James University Hospital Leeds	2,164
	ANE	Royal Victoria Infirmary Newcastle	1,725
	ANT	University Hospital of North Tees	1,693
	BHU	Bradford Royal Hospital	1,689
	AGA	Queen Elizabeth Hospital Gateshead	1,589
	BYO	York Hospital	1,268
North (NE)	BHL-H	Hull Royal Infirmary	1,108
	CSH	Royal Hallamshire Hospital Sheffield	744
	AWC	Cumberland Infirmary Carlisle	671
	CBA	Barnsley General Hospital	596
	CDO	Doncaster Royal Infirmary	452
	CRO	Rotherham Hospital	392
	BHL-B	Source Bioscience	43
North (NW)	PMA	Wythenshawe Hospital	2,275
	PLN	Royal Lancaster Infirmary	2,079
	NLI	Liverpool Clinical Laboratories	1,649
	PBO	Royal Bolton Hospital	1,450
	PWI	Salford Hospital	1,366
	NWA-WA	Warrington Hospital	784
	NWI-AP	Arrowe Park Hospital Wirral	620
	NWI-C	Countess of Chester Hospital	393
	NMA	Leighton Hospital	358
	NWA-WH	Whiston Hospital	339
	PLE-RB	Royal Blackburn Hospital	280
	PLE-RP	Royal Preston Hospital	167
South (SE)	HGU	Royal Surrey County Hospital	3,008
	GCT-M	Maidstone Hospital	2,728
	HWO-W	Worthing Hospital	1,835
	GBR	Royal Sussex County Hospital	1,331
	JPO-QA	Queen Alexandra Hospital	1,172
	KOX	John Radcliffe Hospital Oxford	1,069
	KHW	Wycombe Hospital	966
	GCT-WH	William Harvey Hospital	961
	KRG	Royal Berkshire Hospital	830
	JBA-RH	Royal Hampshire County Hospital	821
	KWI	Wexham Park Hospital	594
	JIW	IWP - (St Mary's Hospital)	387
SW/SE	JPO-PCI	Poundbury Cancer Institute Dorchester	378
South (SW)	LAV	Southmead Hospital Bristol	2,437
	JDO-P	Poole Hospital	2,050
	JSO	Southampton General Hospital	1,706
	LED	Royal Devon & Exeter Hospital (Wonford)	1,426
	LPL	Derriford Hospital Plymouth	1,157
	LGL	Cheltenham General Hospital	1,034
	JSW	Great Western Hospital Swindon	1,006
	LCO	Royal Cornwall Hospital (Treliske)	869
	LSO	Musgrove Park Hospital	852
	JDO-B	Royal Bournemouth Hospital	34
Total included labs			**96,108**

BQA - Wide bore needle QA report using KC62 Cohort

All results are from Table D: WBN/VAB to VAE or Surgery

BQA Table D	WBNB5	WBNB5a	WBNB5b	WBNB5c	WBNB4	WBNB3	WBNB3-wa	WBNB3-na	WBNB3-ns	WBNB2	WBNB1	WBNTotal
Total malignant	Box 01	Box 02	Box 03	Box 04	Box 05	Box 06	Box 07	Box 08	Box 09	Box 10	Box 11	Box 12
Invasive	Box 13	Box 14	Box 15	Box 16	Box 17	Box 18	Box 19	Box 20	Box 21	Box 22	Box 23	Box 24
Non-invasive	Box 25	Box 26	Box 27	Box 28	Box 29	Box 30	Box 31	Box 32	Box 33	Box 34	Box 35	Box 36
Total Benign	Box 37	Box 38	Box 39	Box 40	Box 41	Box 42	Box 43	Box 44	Box 45	Box 46	Box 47	Box 48
Benign, Proven Malig.	Box 49	Box 50	Box 51	Box 52	Box 53	Box 54	Box 55	Box 56	Box 57	Box 58	Box 59	Box 60
No Further Histology	Box 61	Box 62	Box 63	Box 64	Box 65	Box 66	Box 67	Box 68	Box 69	Box 70	Box 71	Box 72
Total B Results	Box 73	Box 74	Box 75	Box 76	Box 77	Box 78	Box 79	Box 80	Box 81	Box 82	Box 83	Box 84

- Box 84 = Box 12 + Box 48 + Box 72
- Box 12 = Box 24 + Box 36
- The benign proven malignancy cases (Box 60) are recorded within the BQA tables but do not form part of the total biopsies (Box 84)
- All WBN/VAB activity = Box 84 + Box 60
- All WBN/VAB screen detected malignancies = Box 12 + Box 61 + Box 60

False positive cases

Any genuine false positive cases require a SIAF to be submitted to SQAS. It is very important that the original malignant biopsy outcome is retained and not deleted or altered on NBSS.

- In 2020-23 there was 1 true false positive B5 to benign/normal surgery reported to SQAS.
- Anomalies are listed in the BQA instances report to facilitate review by the service.
- Following review the submitted BQA might still show inaccurate false positive cases in Box 37 due to anomalies in the way NBSS analyses data.
- The submitted BQA is manually adjusted so that anomalous false positive cases do not appear in Box 37.

BQA Anomalies

Breast screening offices should clear BQA exceptions prior to submission

If exceptions are not resolved then clients are excluded from the BQA tables

Anomalies are listed in the BQA exceptions and instances reports to facilitate review by the breast screening service.

222 exceptions excluded from BQA reporting

- 174 BQA client open episodes
- 4 E0-E2/H0-H2 non-inv
- 44 E5/H5 no details

1883 Table D instances remain in the adjusted BQA following review

- 574 B5B to non-invasive surgery (Box 27)
- 1 false positive B5 to benign/normal surgery (Box 37)
- 1308 benign proven malignancy (Box 49)

124 Table F instances remain in the adjusted BQA following review

- 1 false positive E5 to benign/normal surgery
- 123 benign proven malignancy

BQA Table D: WBN/VAB to VAE or Surgery

Reporting at the laboratory or service level (clients)

BQA Table D Client table	WBN B5	WBN B5a	WBN B5b	WBN B5c	WBN B4	WBN B3	WBN B3-wa	WBN B3-na	WBN B3-ns	WBN B2	WBN B1	WBN Total
Total malignant	46,280	10,641	35,509	130	284	1,155	847	308	-	41	23	**47,783**
Invasive	36,939	1,941	34,935	63	65	187	137	50	-	20	10	**37,221**
Non-invasive	9,341	8,700	574	67	219	968	710	258	-	21	13	**10,562**
Total Benign	1	0	1	0	90	6,247	2,652	3,595	-	317	105	**6,760**
Benign, Proven Malig.	1,308	374	933	1	9	105	86	19	-	1	3	**1,426**
No Further Histology	1,455	233	1,219	3	21	1,150	560	590	-	35,682	3,417	**41,725**
Total B Results	**47,736**	**10,874**	**36,729**	**133**	**395**	**8,552**	**4,059**	**4,493**	**-**	**36,040**	**3,545**	**96,268**

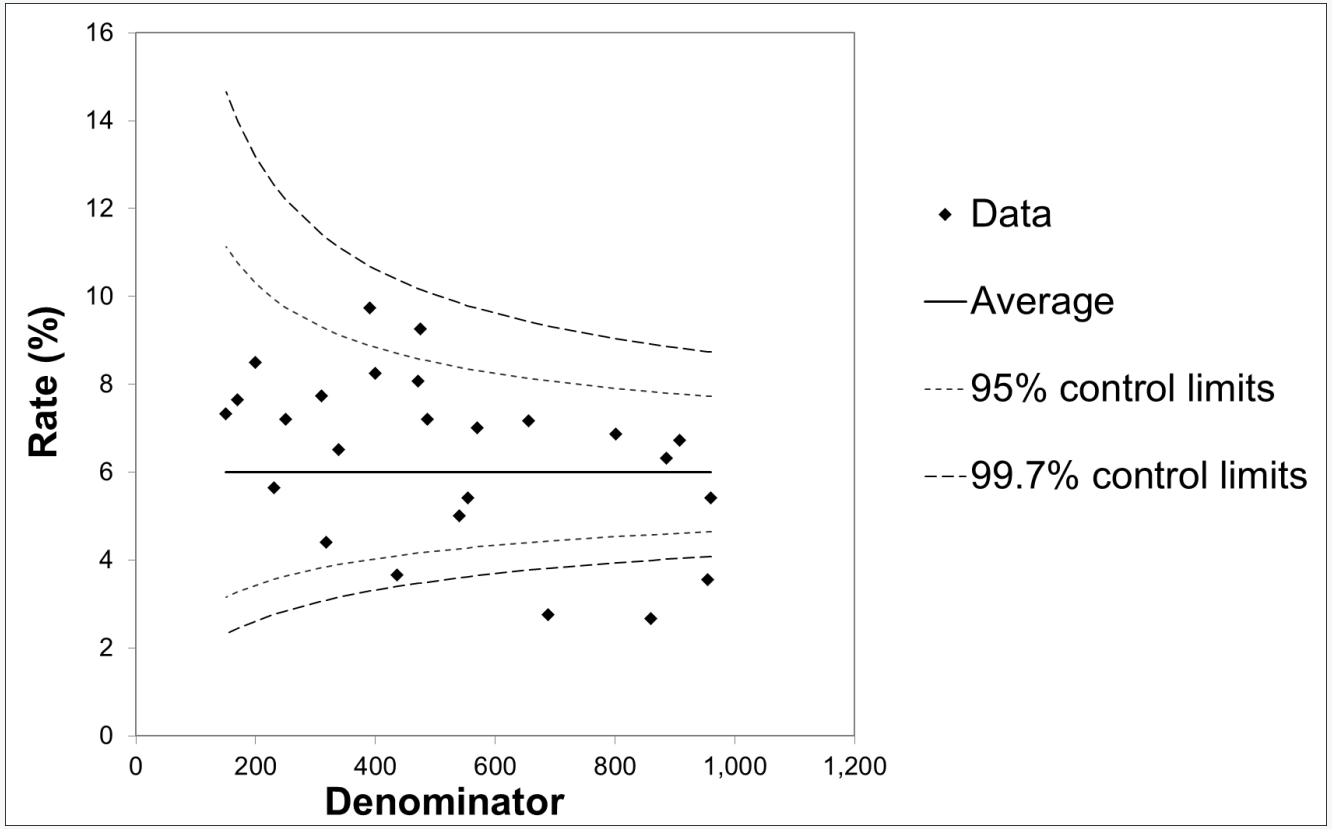
Reporting at the individual pathologist level (tests)

BQA Table D All tests	WBN B5	WBN B5a	WBN B5b	WBN B5c	WBN B4	WBN B3	WBN B3-wa	WBN B3-na	WBN B3-ns	WBN B2	WBN B1	WBN Total
Total malignant	52,793	13,656	38,942	195	720	2,529	1,807	722	-	2,734	1,074	**59,850**
Invasive	41,962	3,537	38,318	107	269	993	666	327	-	1,914	739	**45,877**
Non-invasive	10,831	10,119	624	88	451	1,536	1,141	395	-	820	335	**13,973**
Total Benign	1	0	1	0	98	6,574	2,786	3,788	-	1,066	376	**8,115**
Benign, Proven Malig.	1,518	454	1,060	4	30	145	115	30	-	103	54	**1,850**
No Further Histology	1,709	308	1,394	7	30	1,505	701	804	-	38,928	5,446	**47,618**
Total B Results	**54,503**	**13,964**	**40,337**	**202**	**848**	**10,608**	**5,294**	**5,314**	**-**	**42,728**	**6,896**	**115,583**

Suggested thresholds apply to client table only

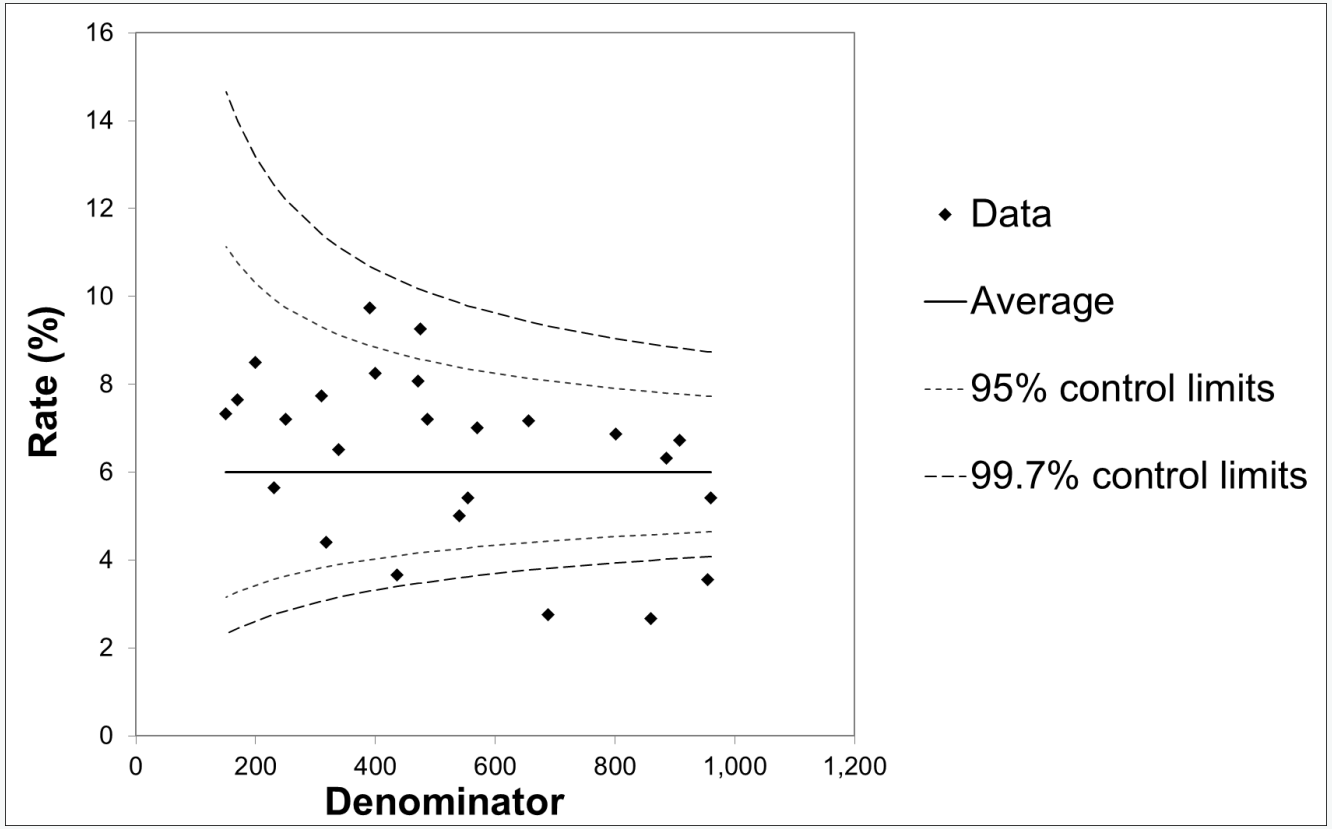
Control charts

- Useful if no defined standards
- Compare against peers
- Helps explain natural variation
- Mitigates against small numbers



Control charts

- Data points within control limits deemed subject to national variation
- Any point outside this is deemed an “outlier”
- 95% & 99.7% high & low outliers



Control charts – outlier status

- An outlier status does not automatically signify poor performance/practice

- All it shows is that further investigations are necessary to explain this variation
  - Is the data correct?
  - Is there a known explanation?
  - Does it matter?
  - Do something about it (audit etc…)

Guidelines on the interpretation of control charts

See G150-Non-op-reporting-breast-cancer-screening.pdf (rcpath.org, 2021)

Each chart has five lines: upper and lower control limits at the 95% and 99.7% levels, and the England average. Data points within the control limits are deemed to be subject to natural variation. Data points outside of the 95% control limits are significantly different and are deemed to be a result of special cause variation. This is even more so for the 99.7% control limits. Investigations should take place to determine the nature and cause of this variation.

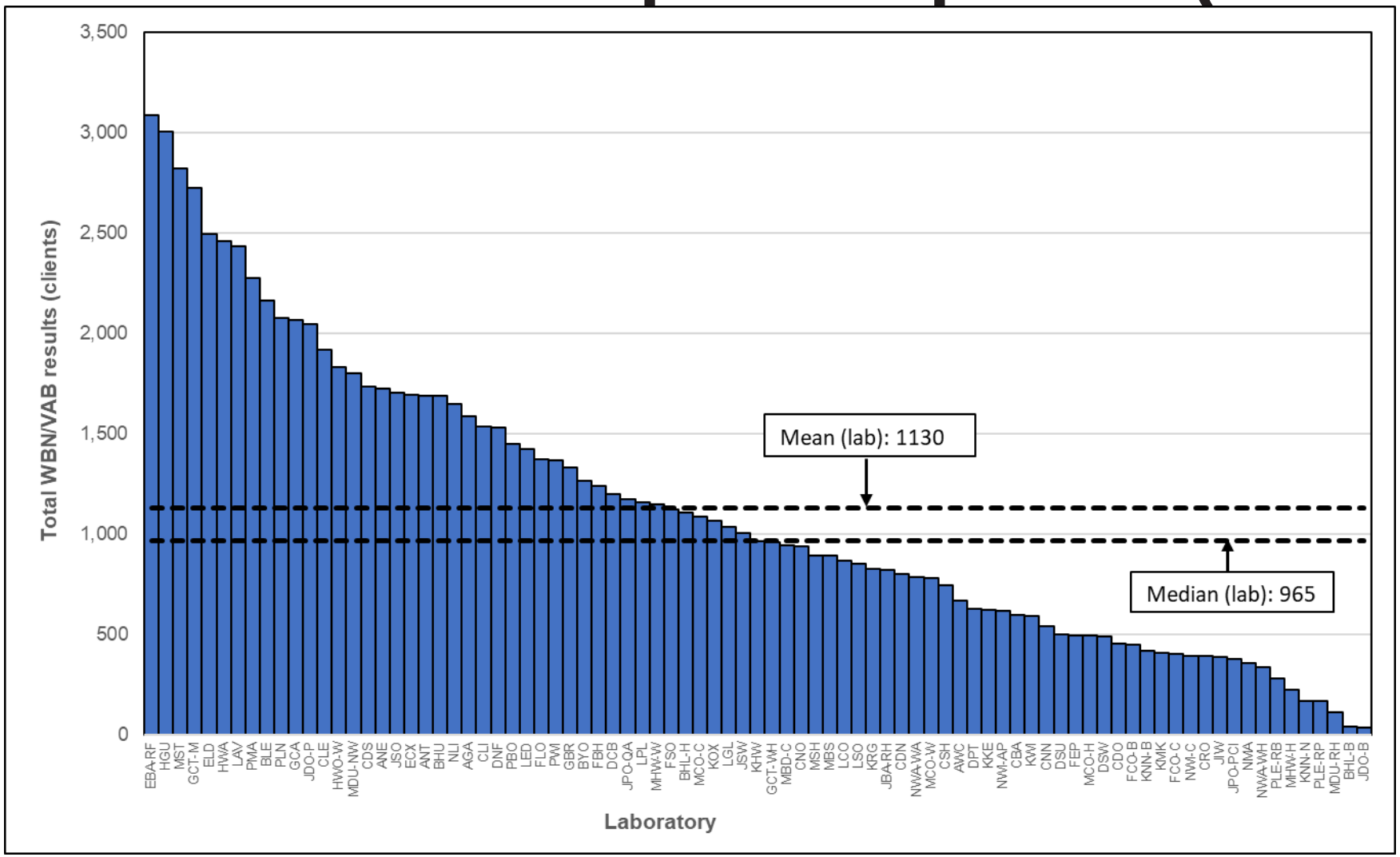
Breast screening services and pathologists with results falling outside of the control limits are referred to as outliers. It is important to note that outlier performance should not be assumed to be worse (or better) than the average; the data simply indicate that the performance is significantly different to that which could be explained by chance alone. Outlier status may also not necessarily equate with clinical relevance.

Laboratory Level Data

Laboratories with 30+ clients

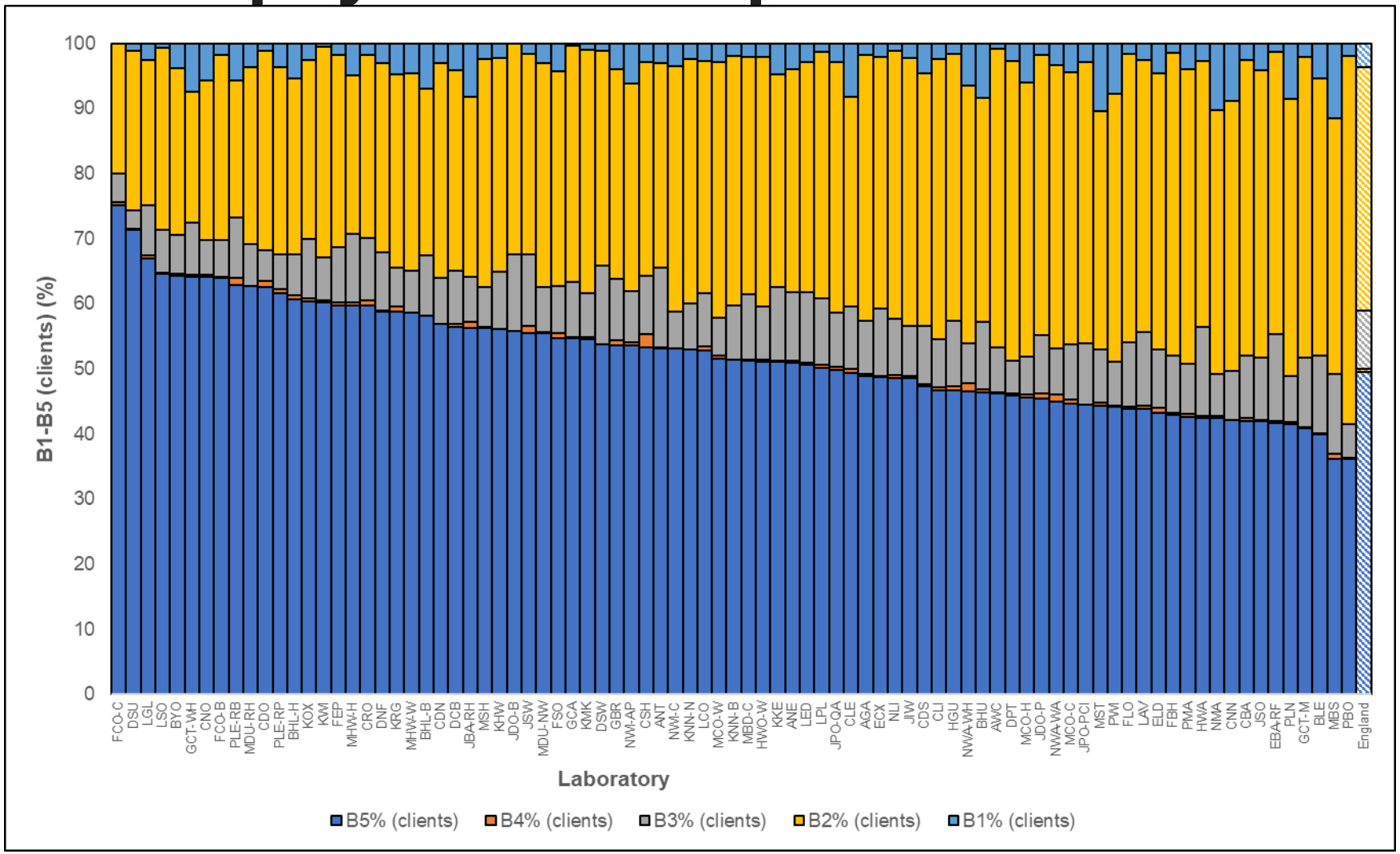
England average includes all cases

Number of core biopsies reported (clients)



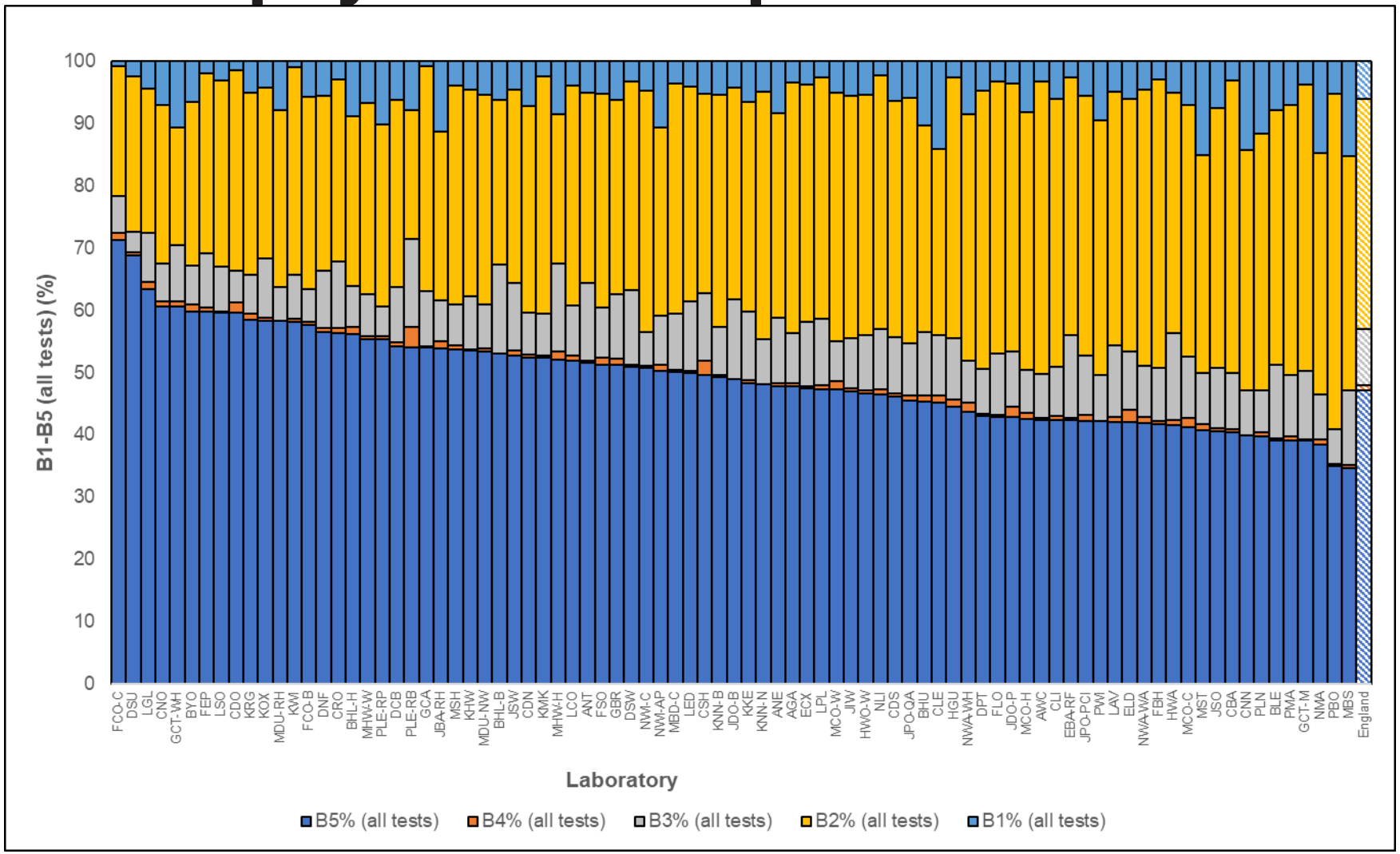
Range 34 to 3091

Core biopsy results reported as B1 to B5 (clients)



England (clients)
B1: 3.7%
B2: 37.4%
B3: 8.9%
B4: 0.4%
B5: 49.6%

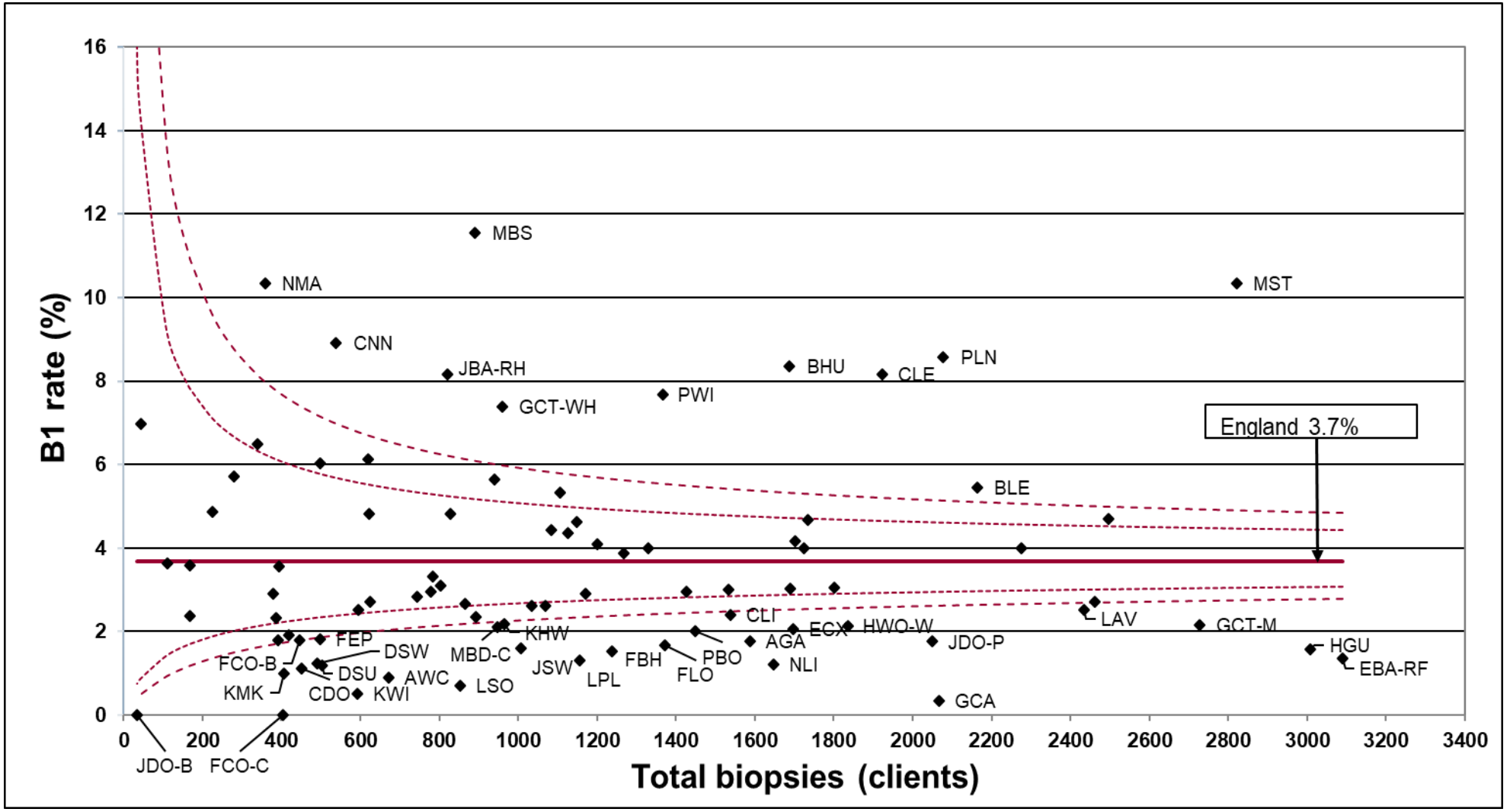
Core biopsy results reported as B1 to B5 (all tests)



England (clients)
B1: 3.7%
B2: 37.4%
B3: 8.9%
B4: 0.4%
B5: 49.6%

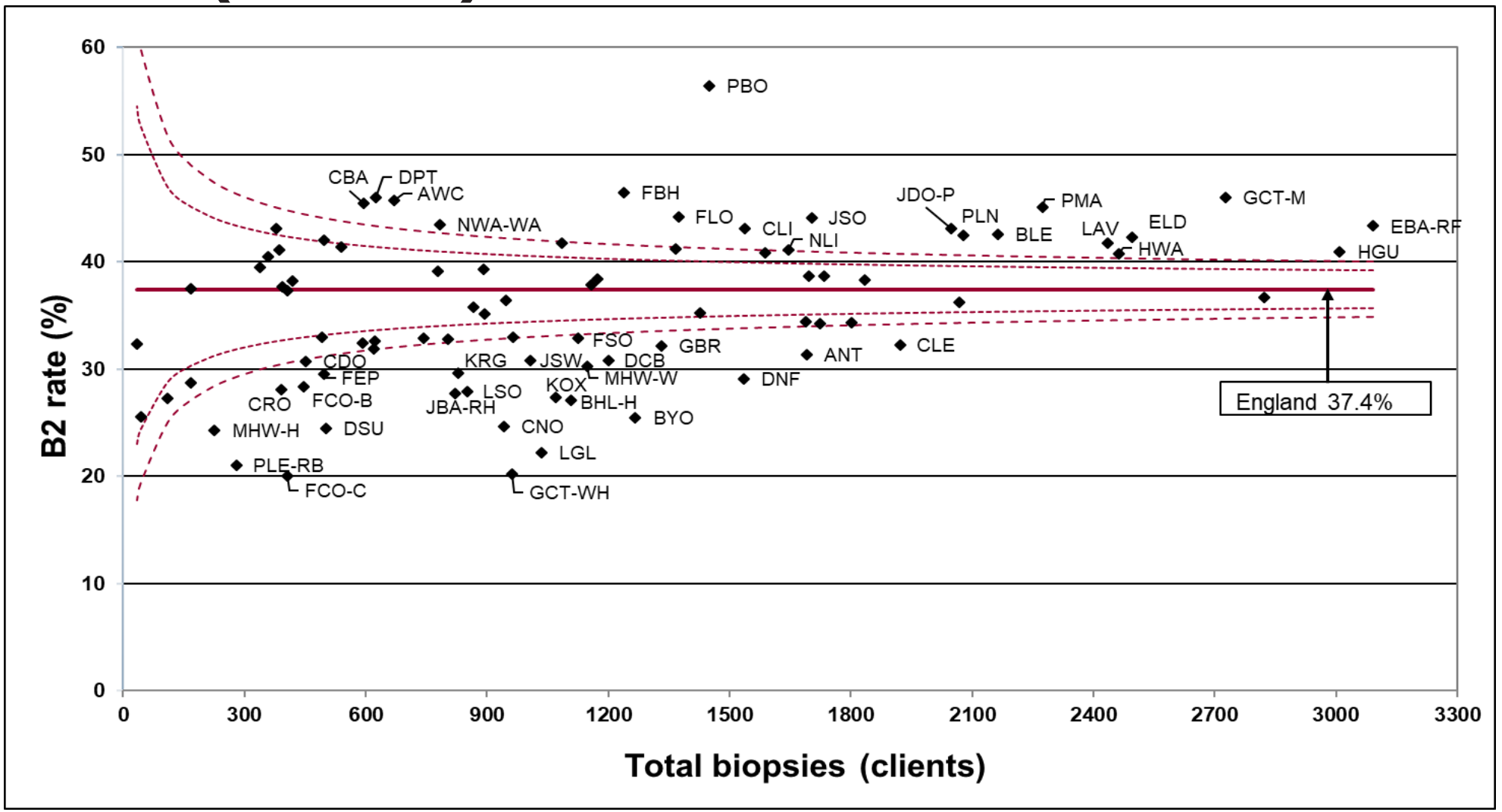
England (all tests)
B1: 6.0%
B2: 37.0%
B3: 9.2%
B4: 0.7%
B5: 47.2%

B1 rate (clients)



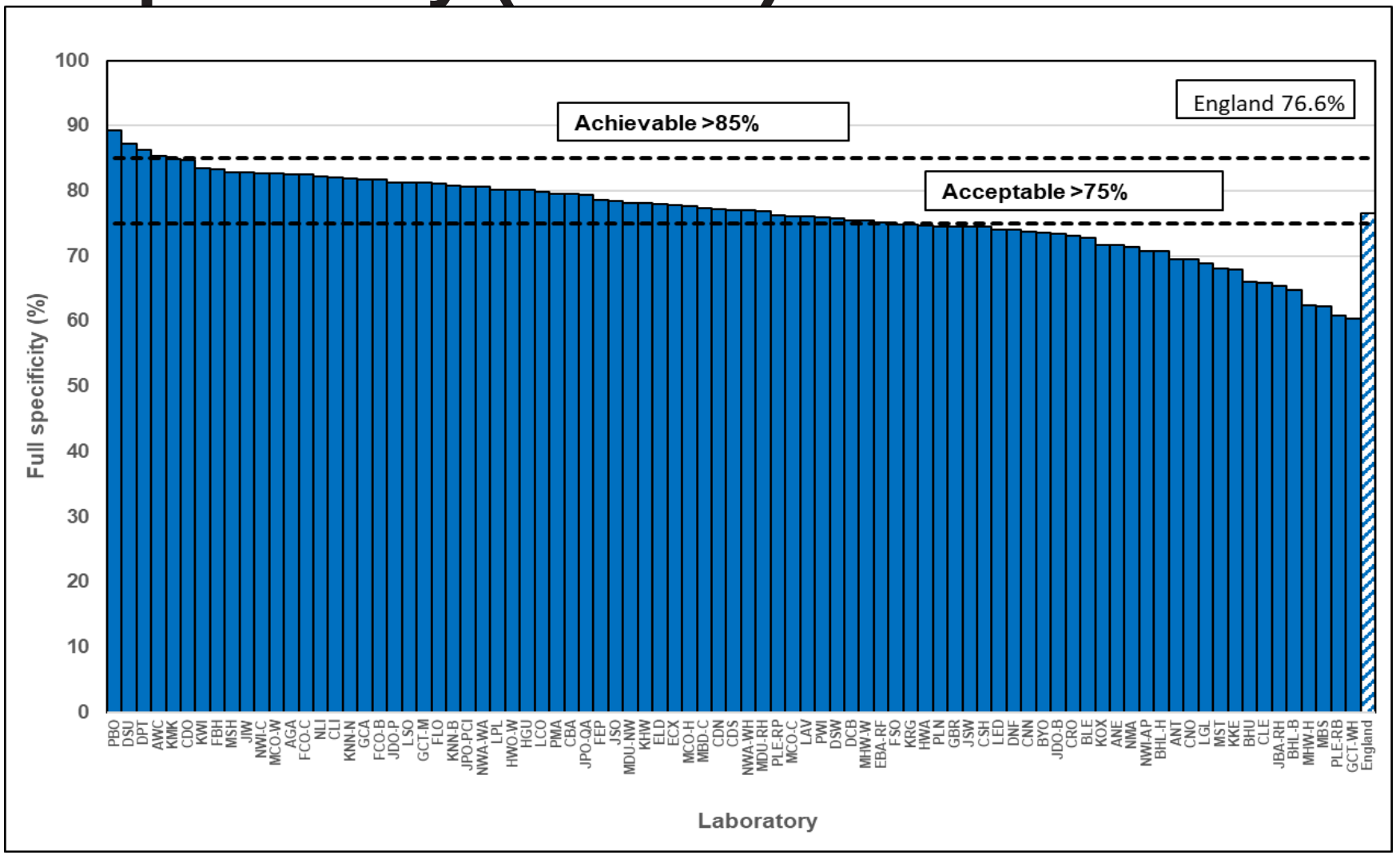
Range 0% to 11.6% (median 2.9%)

B2 rate (clients)



Range 20% to 56.4% (median 36.3%)

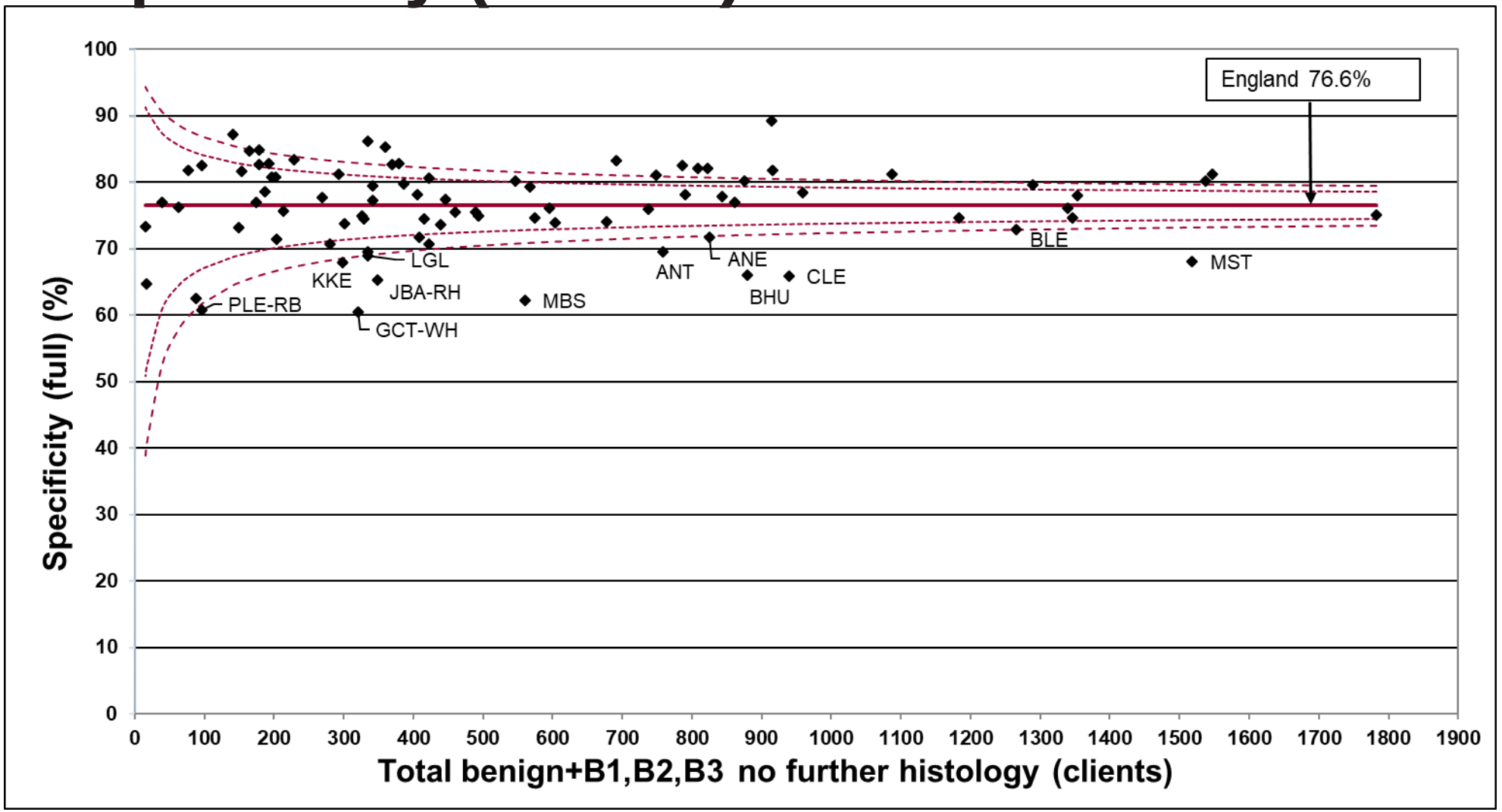
Full specificity (clients)



53 labs >75%
4 labs achievable
49 labs acceptable

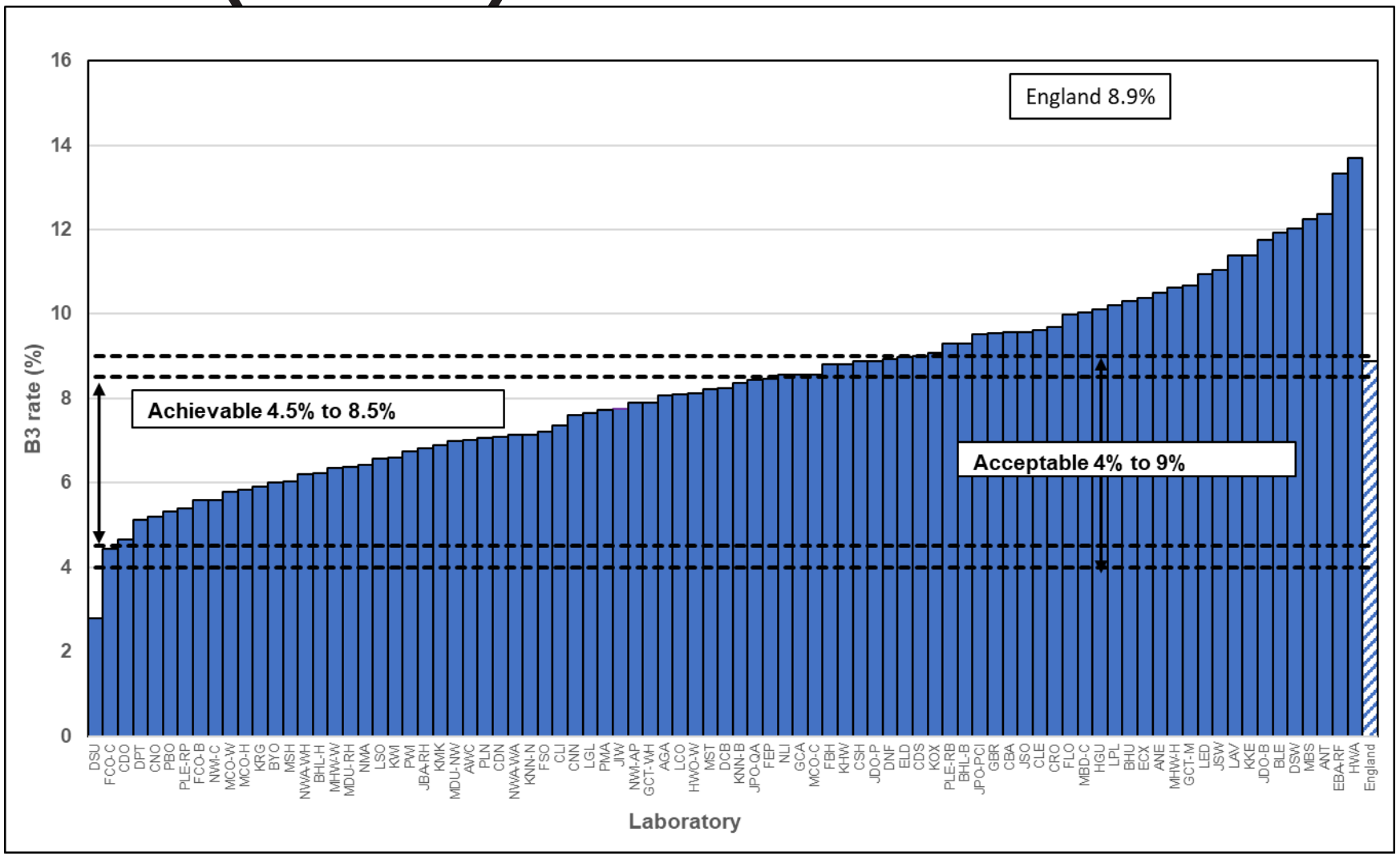
Range 60.4% to 89.3% (median 77.0%)

Full specificity (clients)



Range 60.4% to 89.3% (median 77.0%)

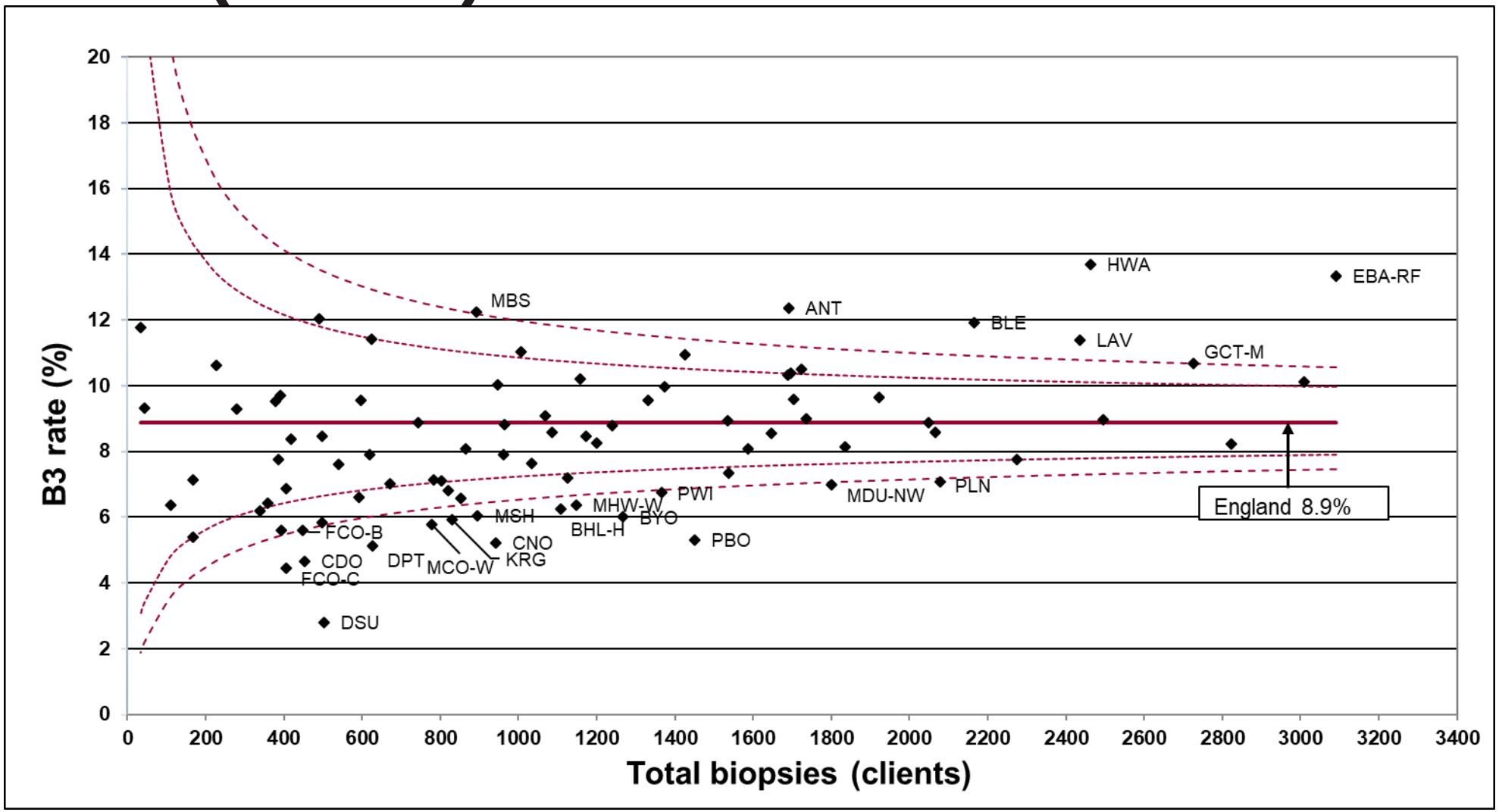
B3 rate (clients)



55/85 (65%) labs are within acceptable threshold 4-9%
44 labs achievable
11 labs acceptable

Range 2.8% to 13.7% (median 8.2%)

B3 rate (clients)



Range 2.8% to 13.7% (median 8.2%)

B3 with/without atypia - the Derby experience

- B3 cases for 2017-20 (total 157 cases)
- 119 (**75.8%**) with atypia and 38 (24.2%) without atypia in 2017-20 audit

- Requested SQAS for a list of B3 cases for 2018-21 (total 142 cases)
- 110 (77.5%) with atypia and 32 (22.5%) without atypia
- NBSS records were checked against pathology reports
- A total of 43 records on NBSS were incorrect and were amended

- 71 (**50.0%**) with atypia and 71 (50.0%) without atypia in 2018-21 audit

B3 with/without atypia – data entry on NBSS

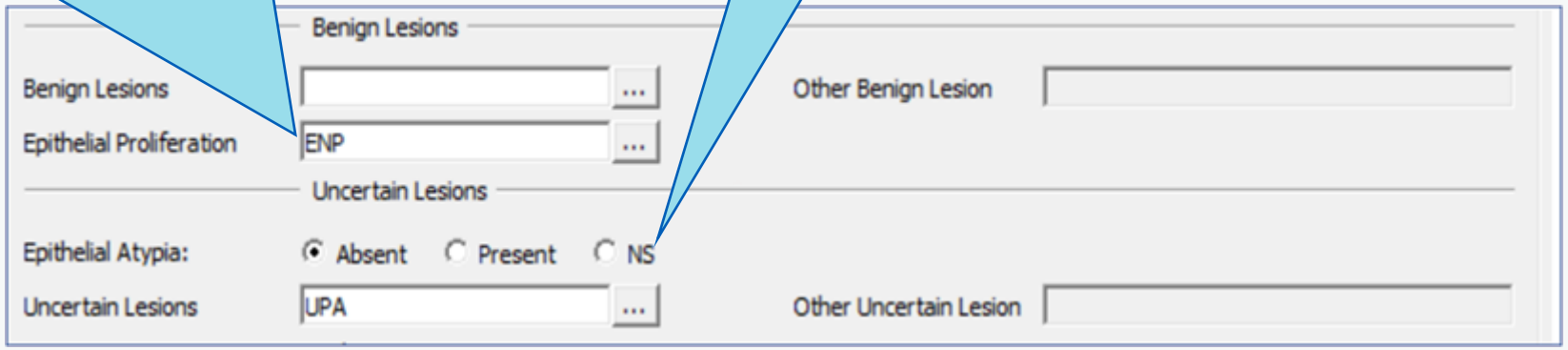
Epithelial Proliferation

EAD = Present with atypia (ductal)
EAF = Present with atypia (FEA)
EAL = Present with atypia (lobular)
ENP = Not present
EPW = Present without atypia

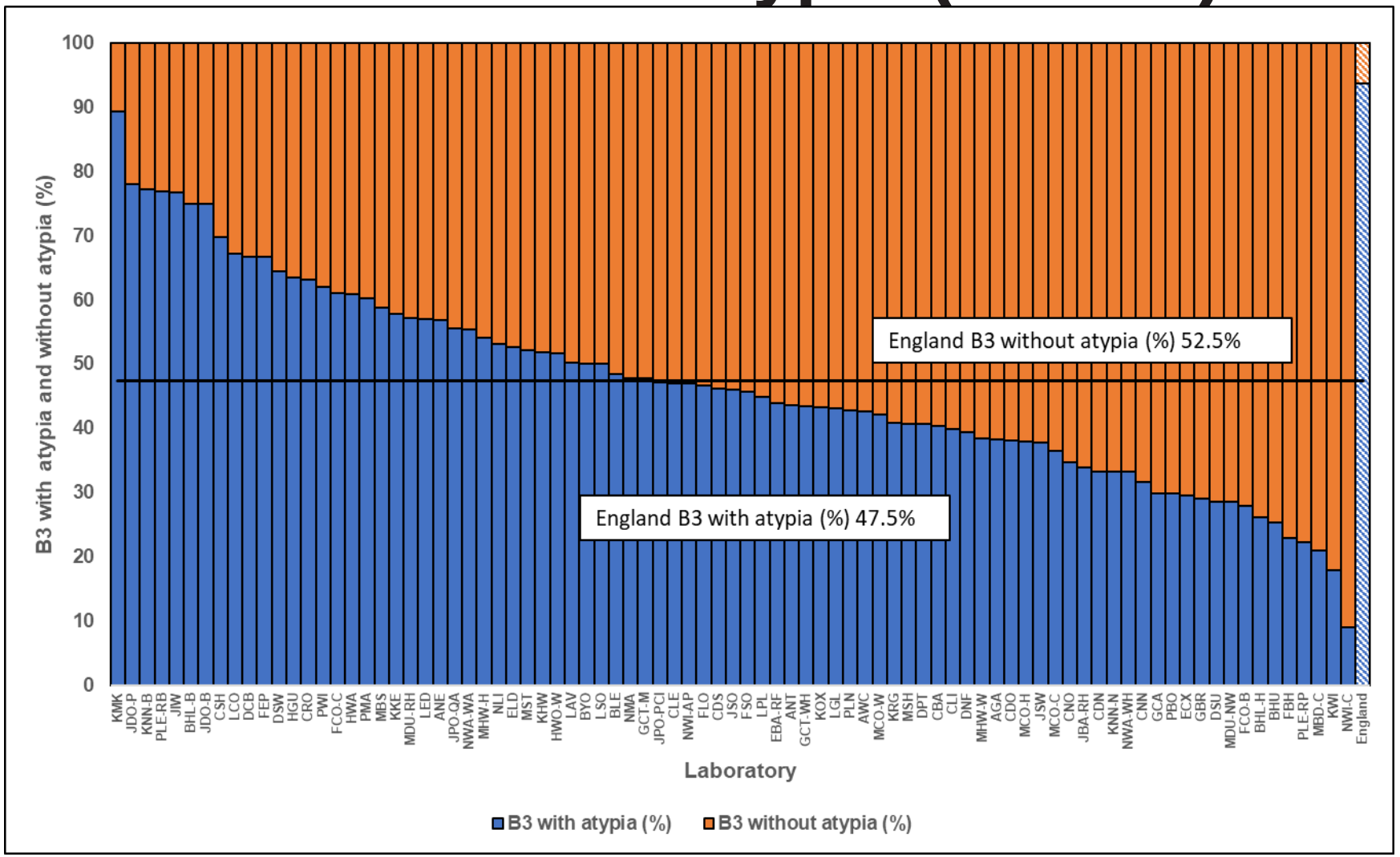
Match

Epithelial Atypia

Absent
Present
NS (obsolete)



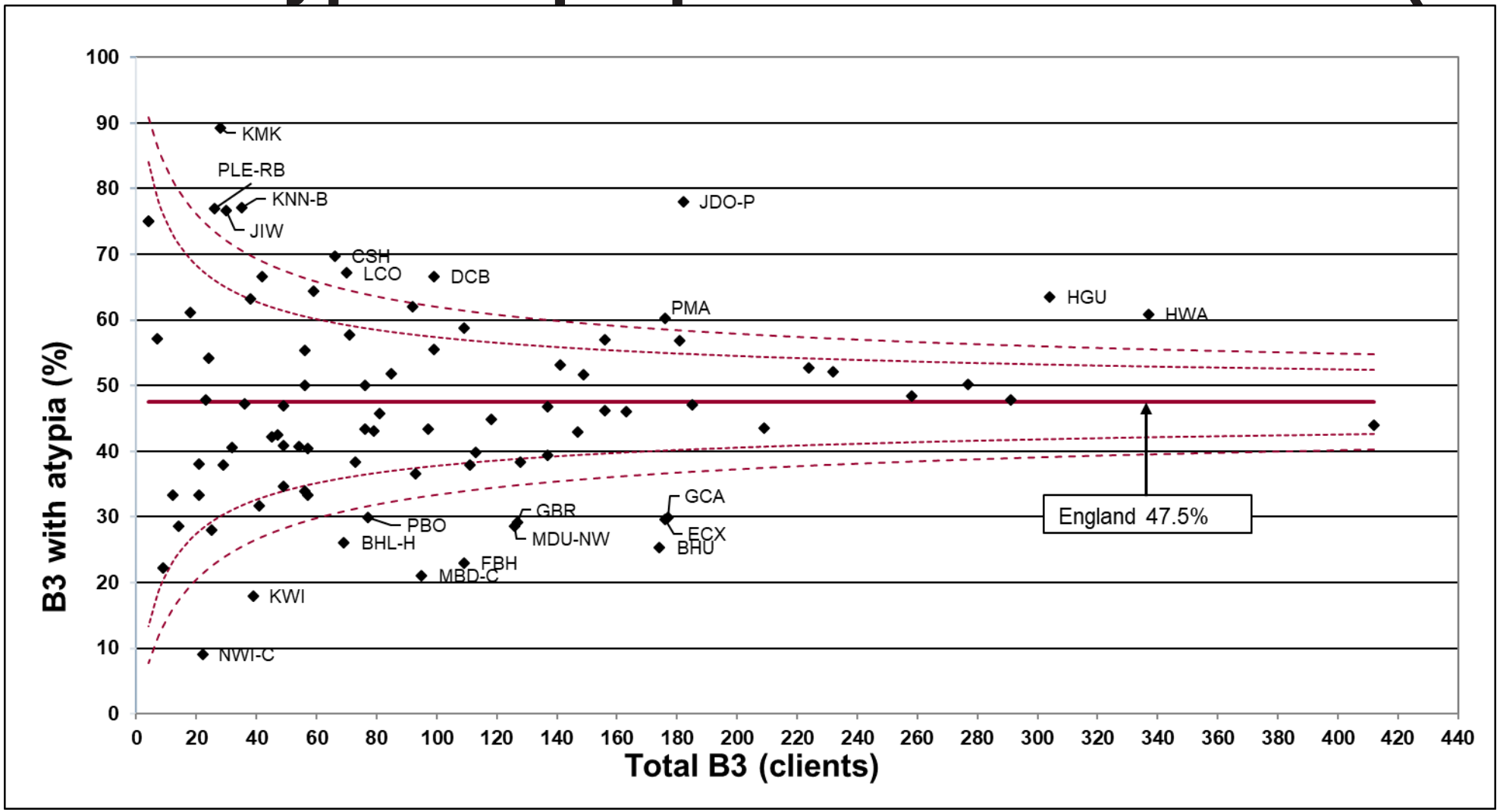
B3 with and without atypia (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range with atypia 9.1% to 89.3% (median 46.0%)

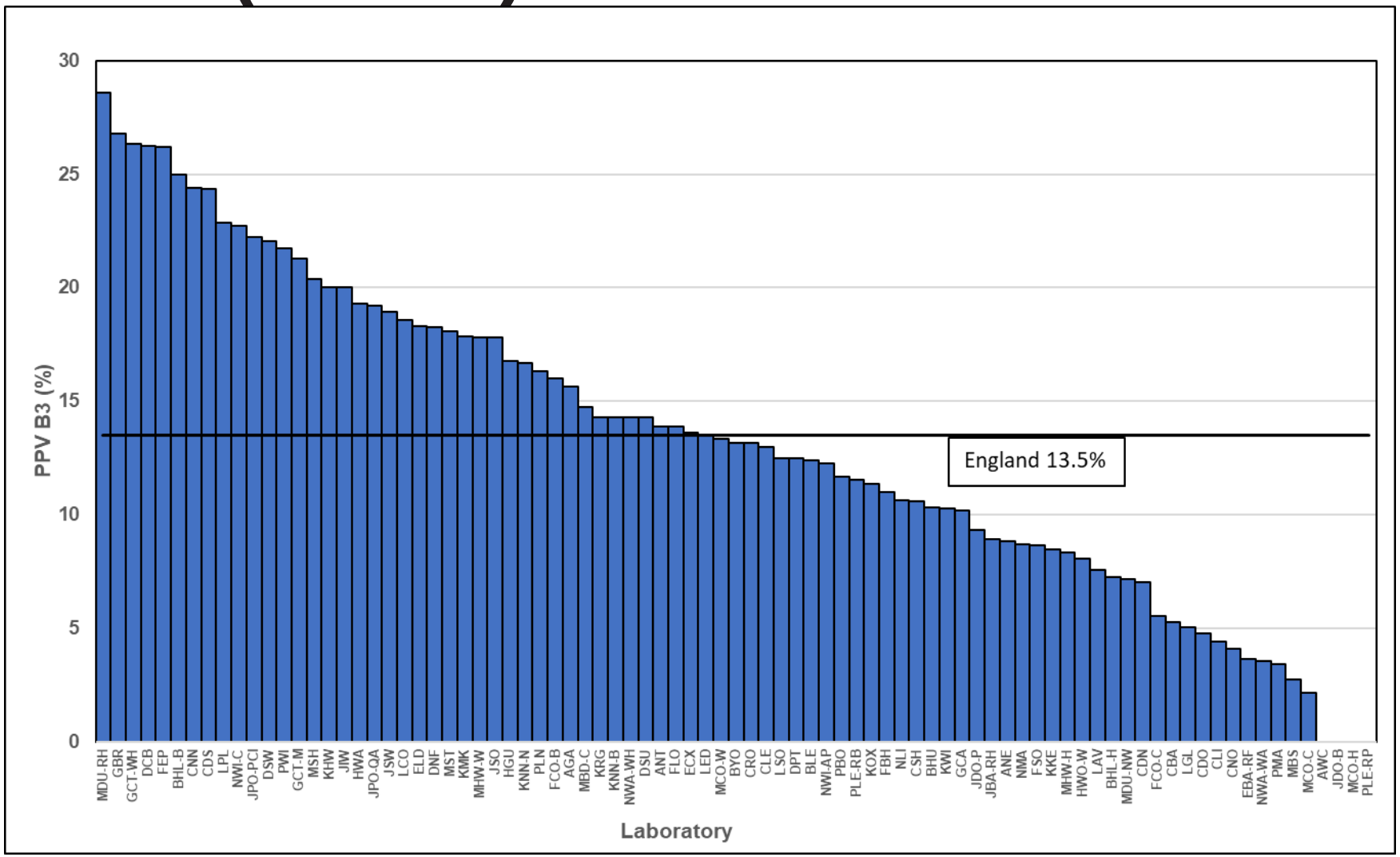
B3 with atypia as proportion of B3 results (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

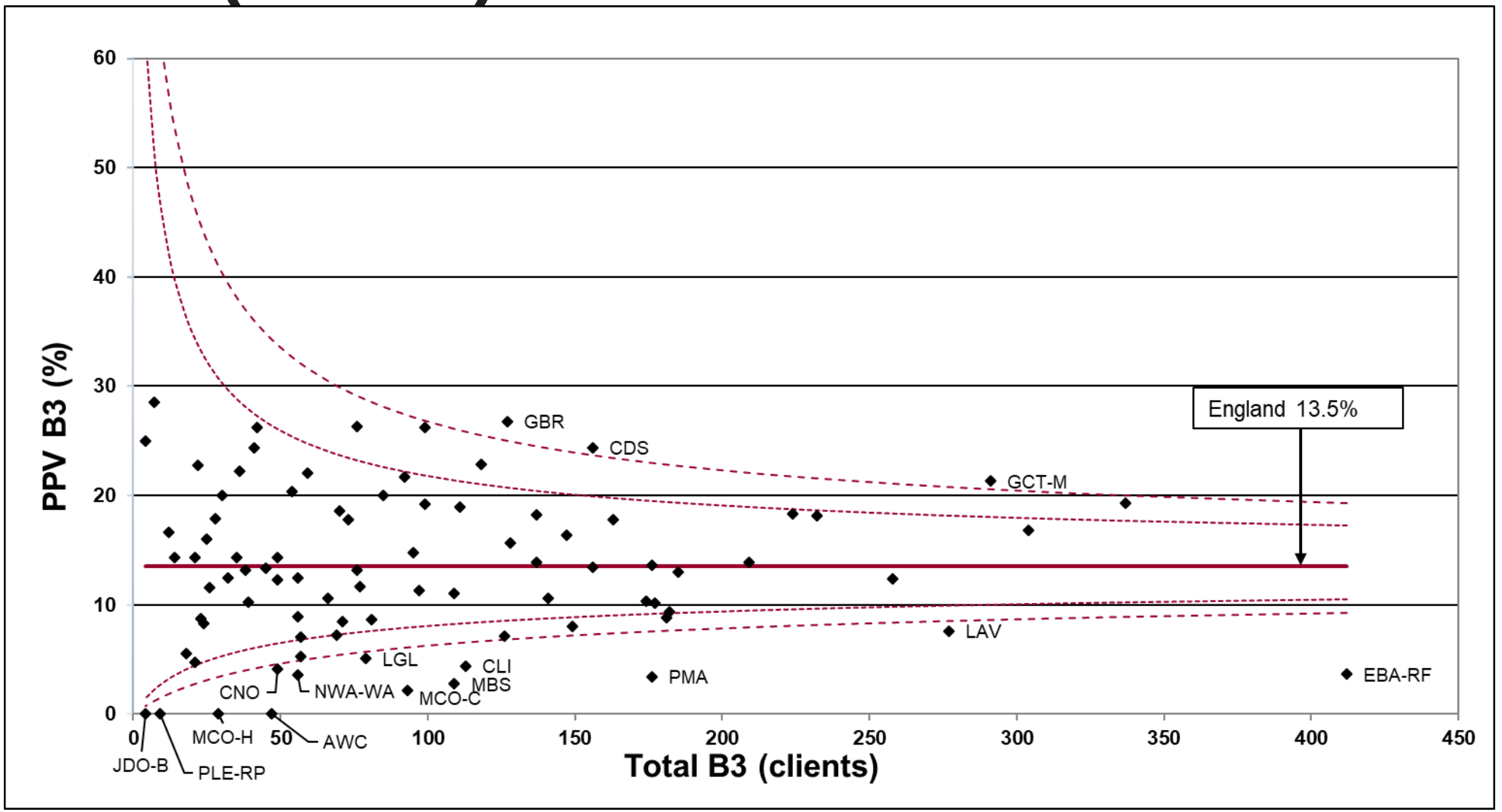
Range 9.1% to 89.3% (median 46.0%)

PPV B3 (clients)



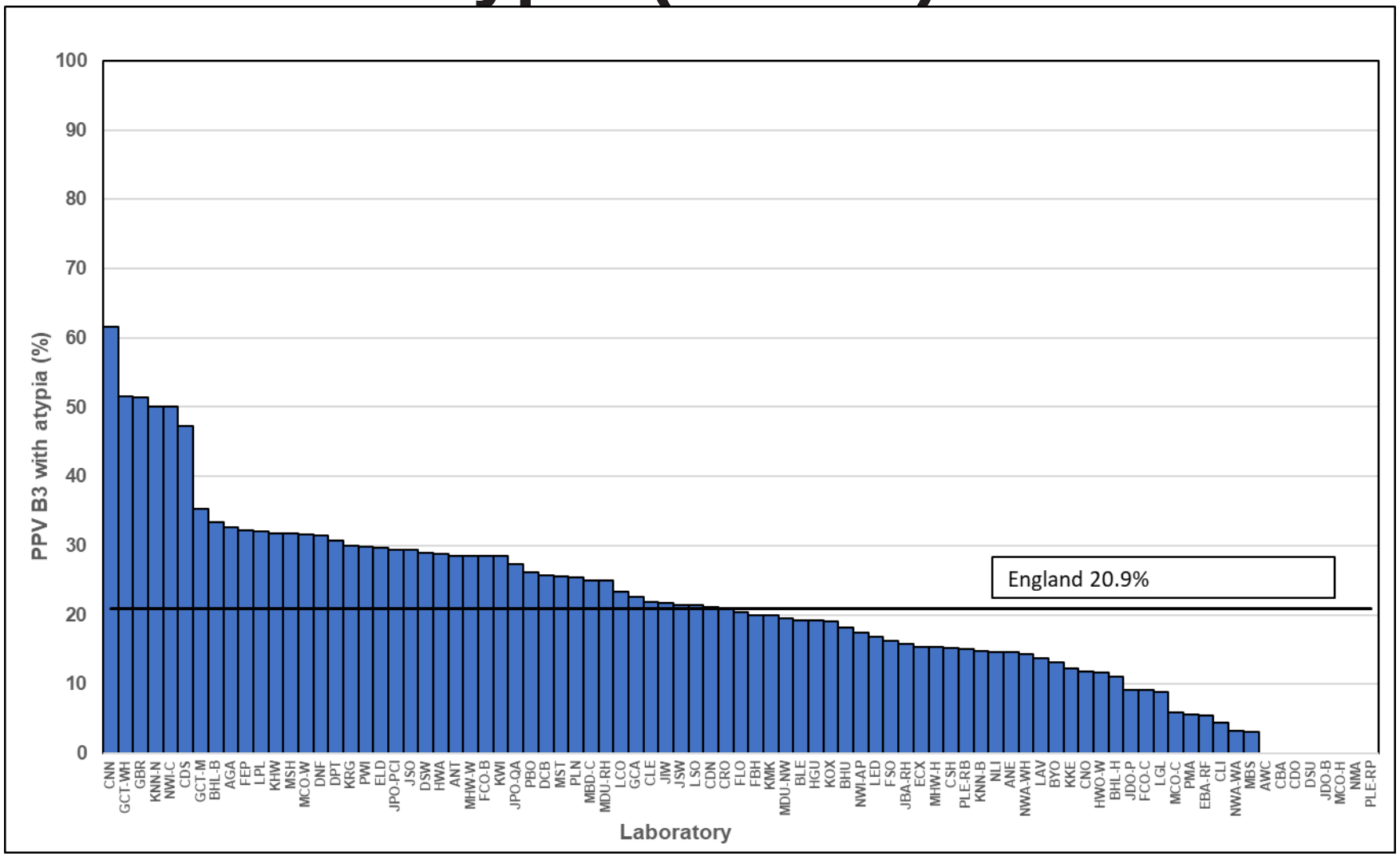
Range 0% to 28.6% (median 13.2%)

PPV B3 (clients)



Range 0% to 28.6% (median 13.2%)

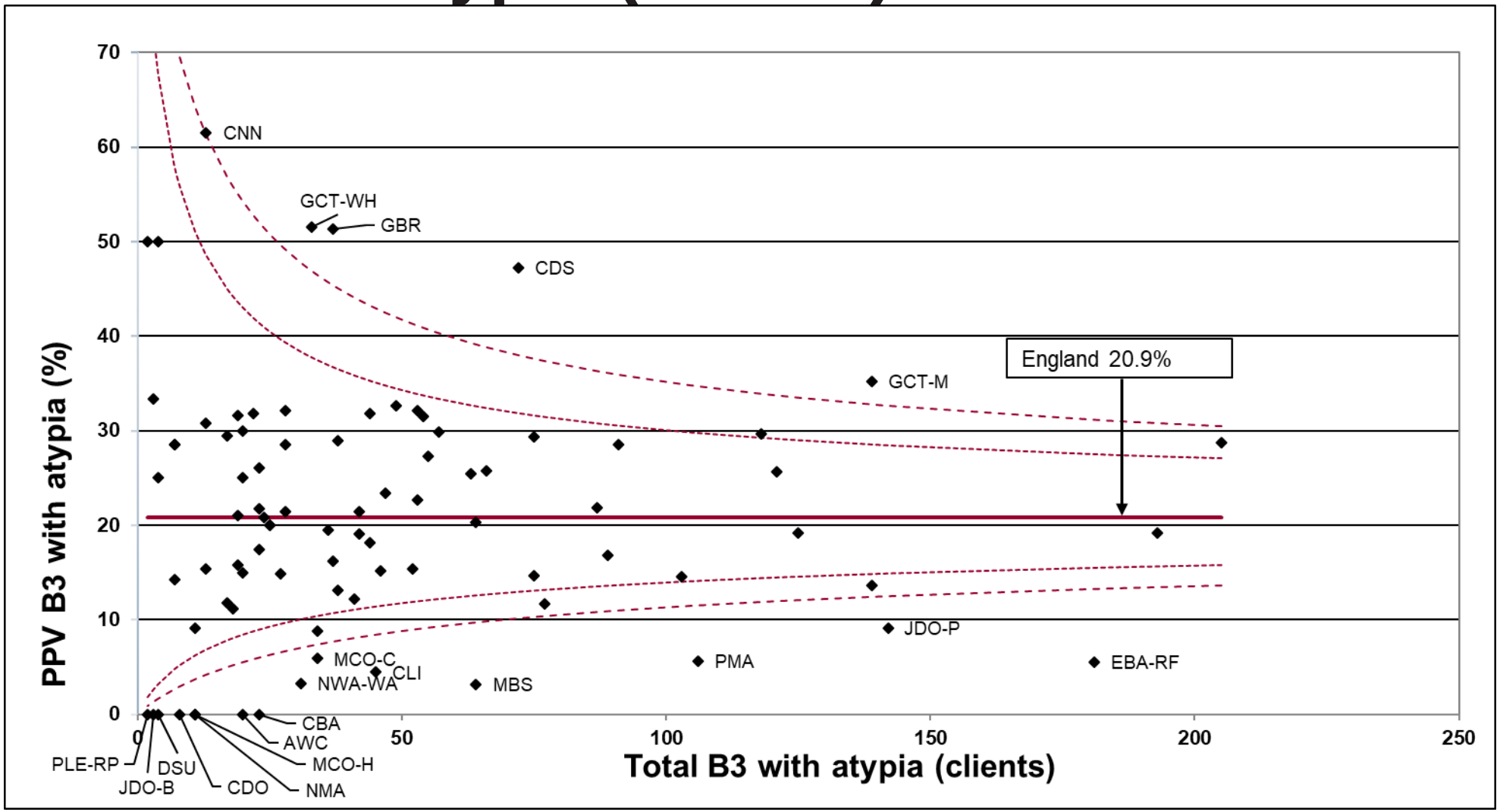
PPV B3 with atypia (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 61.5% (median 20.3%)

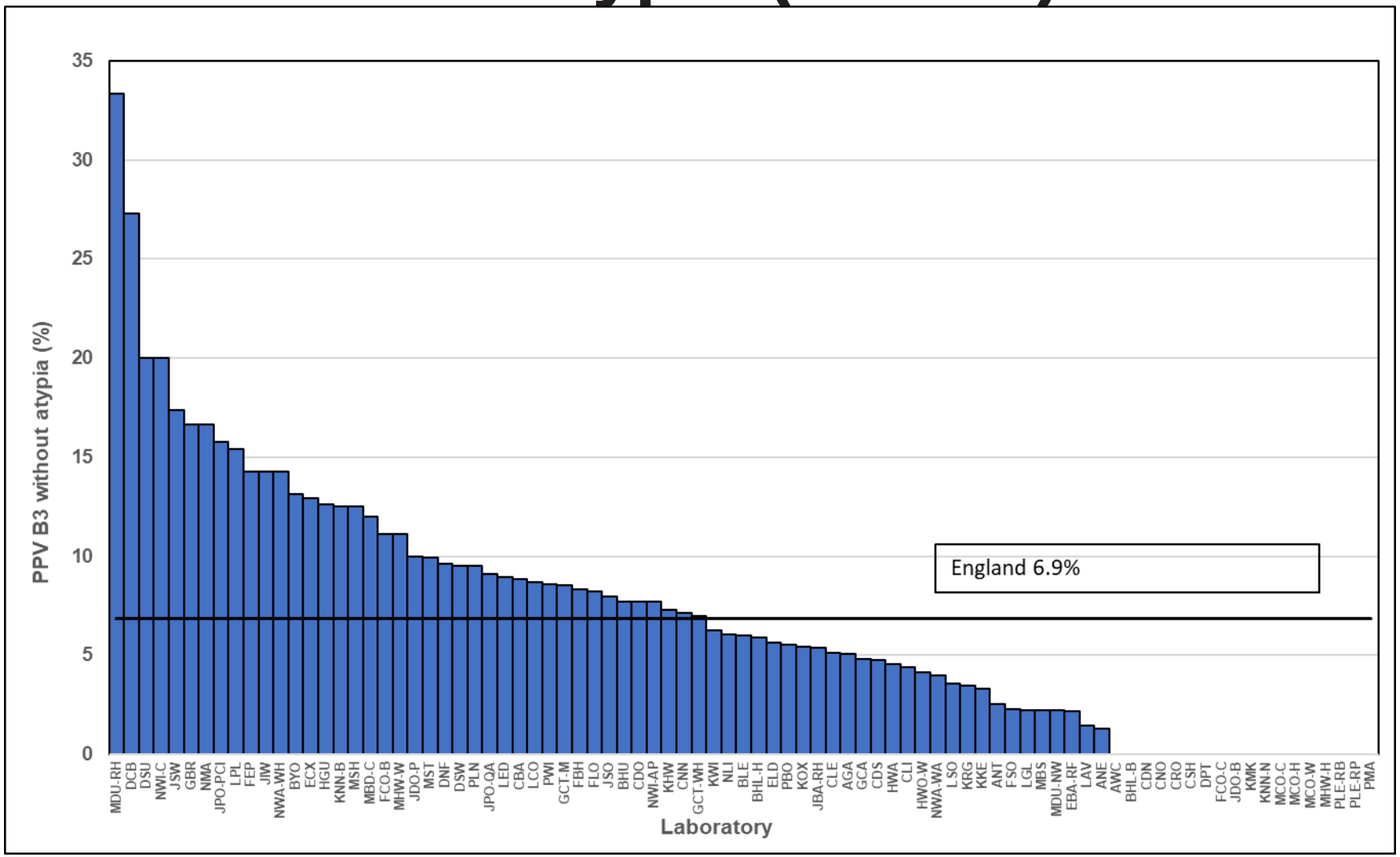
PPV B3 with atypia (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 61.5% (median 20.3%)

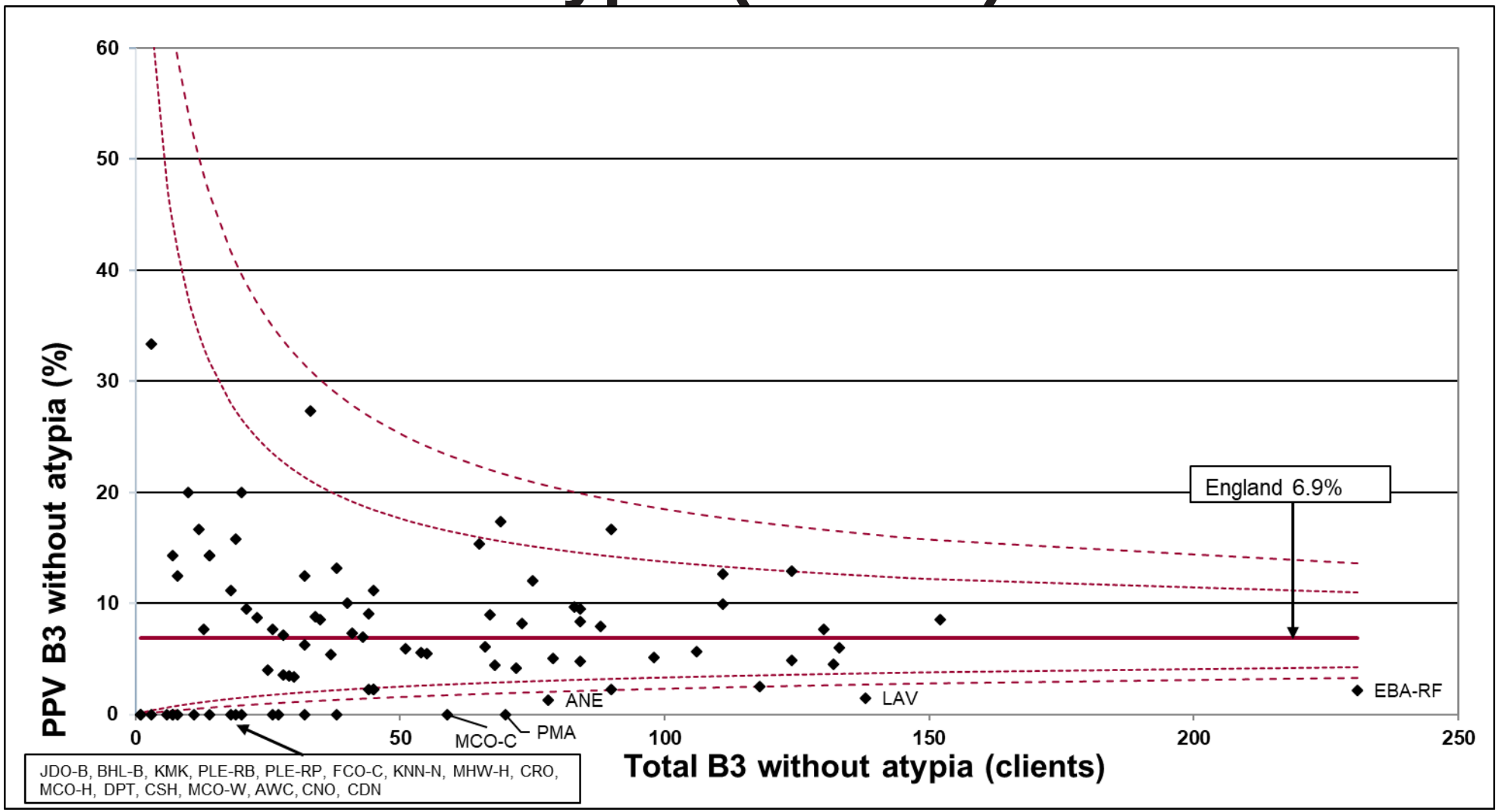
PPV B3 without atypia (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 33.3% (median 6.0%)

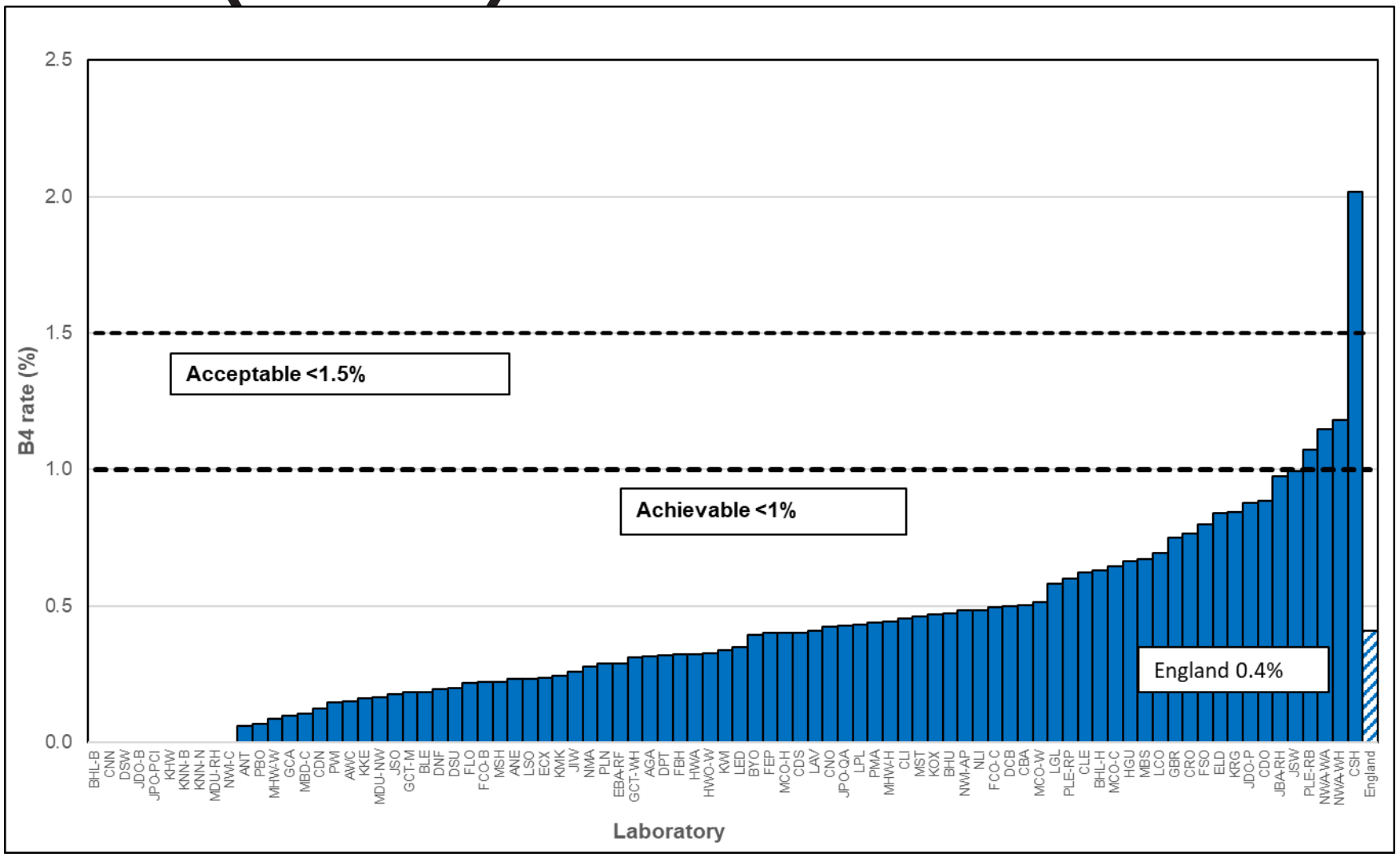
PPV B3 without atypia (clients)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 33.3% (median 6.0%)

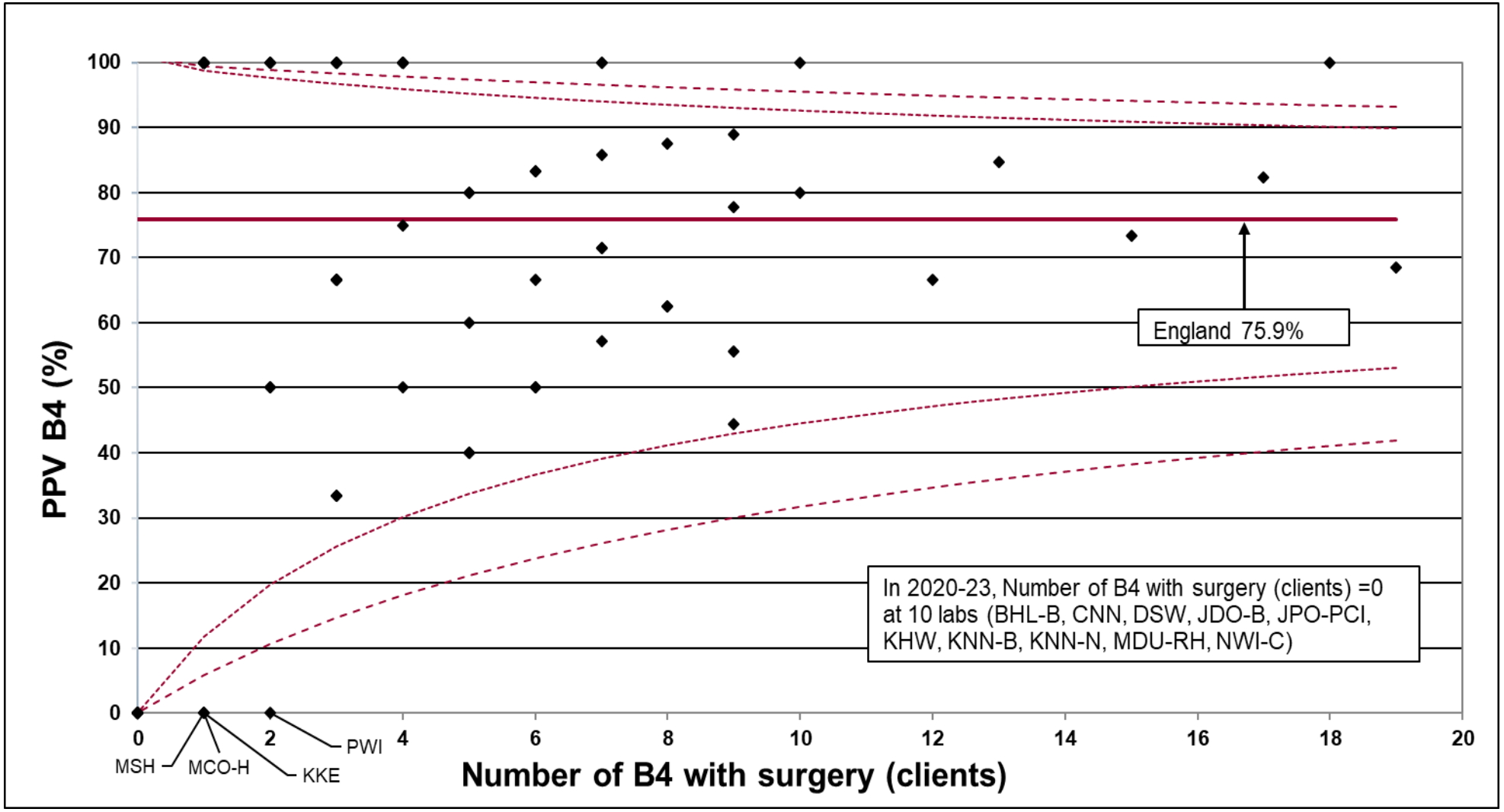
B4 rate (clients)



84/85 labs are within acceptable threshold <1.5%
81 labs achievable
3 labs acceptable

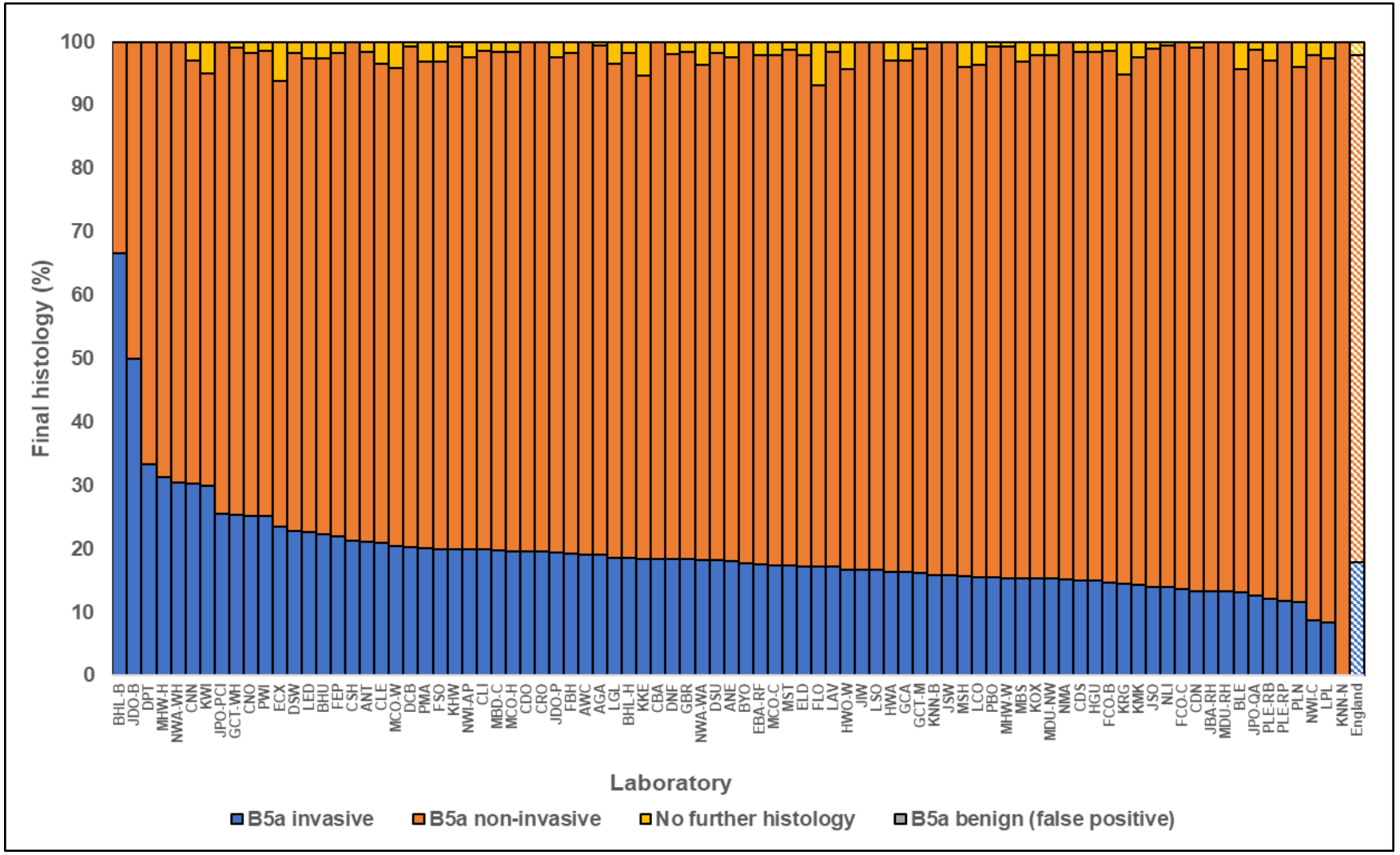
Range 0% to 2.0% (median 0.3%)

PPV B4 (clients)



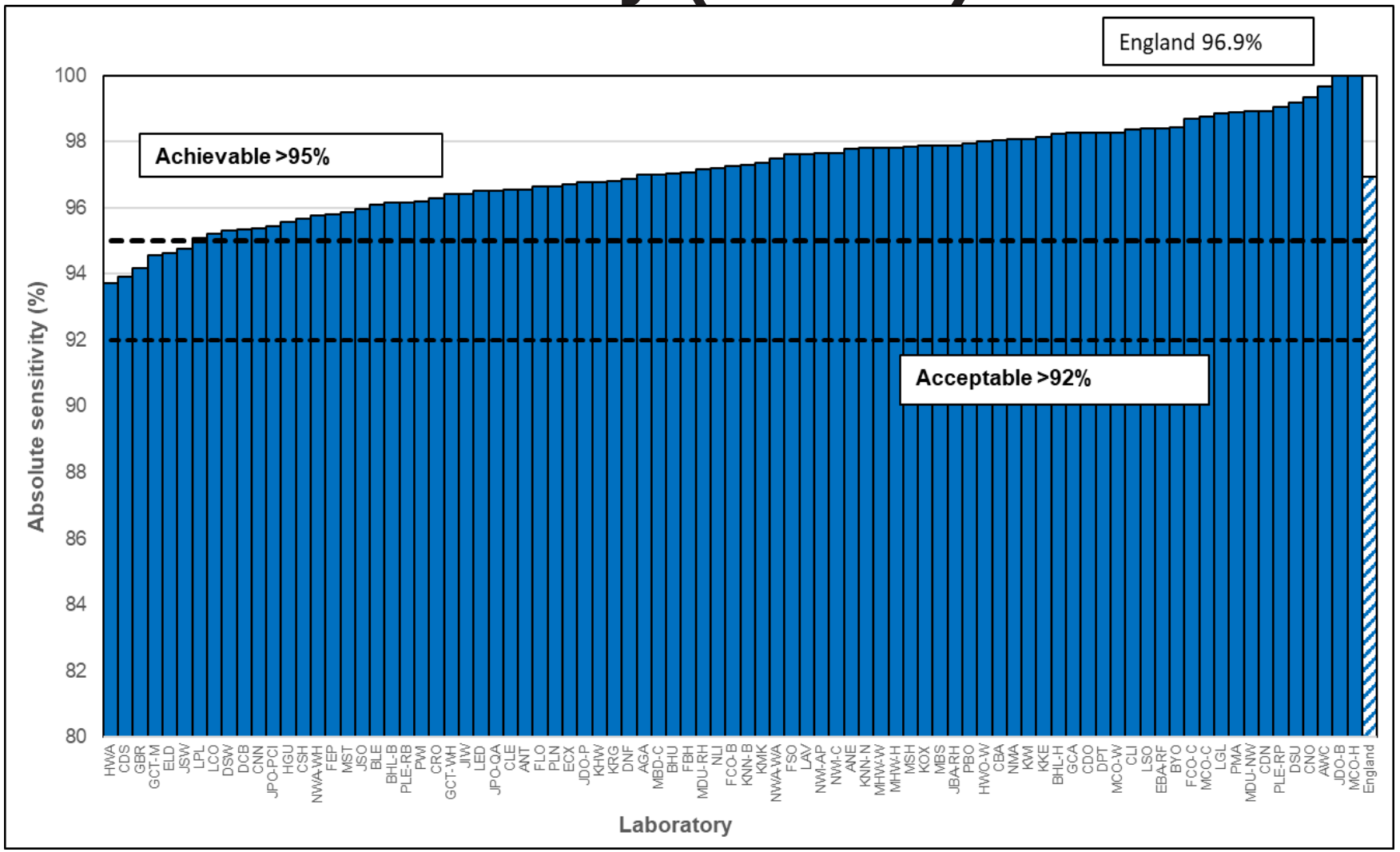
Range 0% to 2.0% (median 0.3%)

B5a invasive status at surgery (clients)



80.0% remained non-invasive, 17.8% found to be invasive at surgery, 2.1% no further histology. No B5a false positive cases in 2020-23.
Range B5a found to be invasive at surgery 0% to 66.7% (median 18.0%)

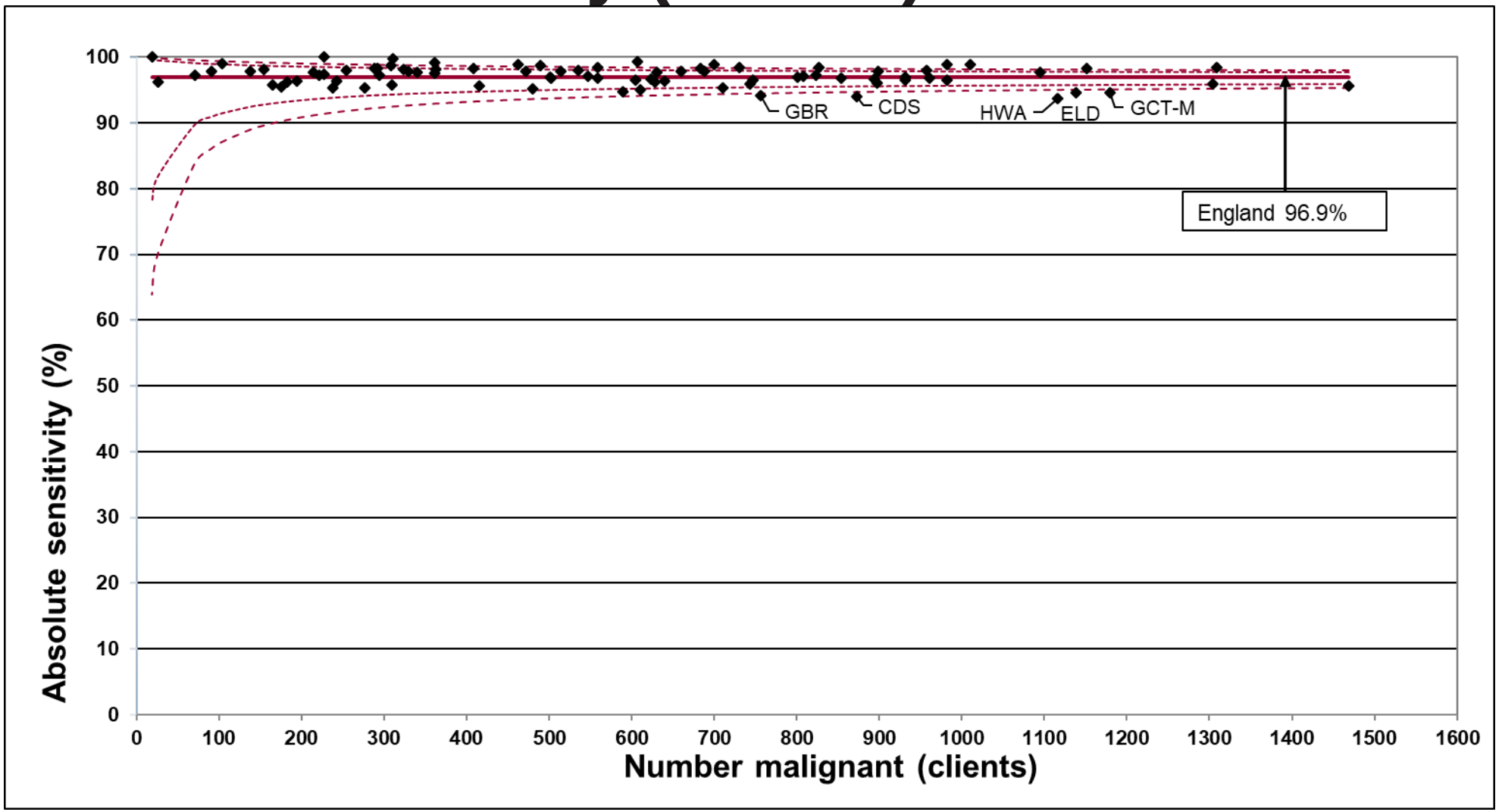
Absolute sensitivity (clients)



All 85 labs are within acceptable threshold >92%
79 labs achievable
6 labs acceptable

Range 93.7% to 100% (median 97.3%)

Absolute sensitivity (clients)



Range 93.7% to 100% (median 97.3%)

Pathologist Level Data

Pathologists with 30+ tests

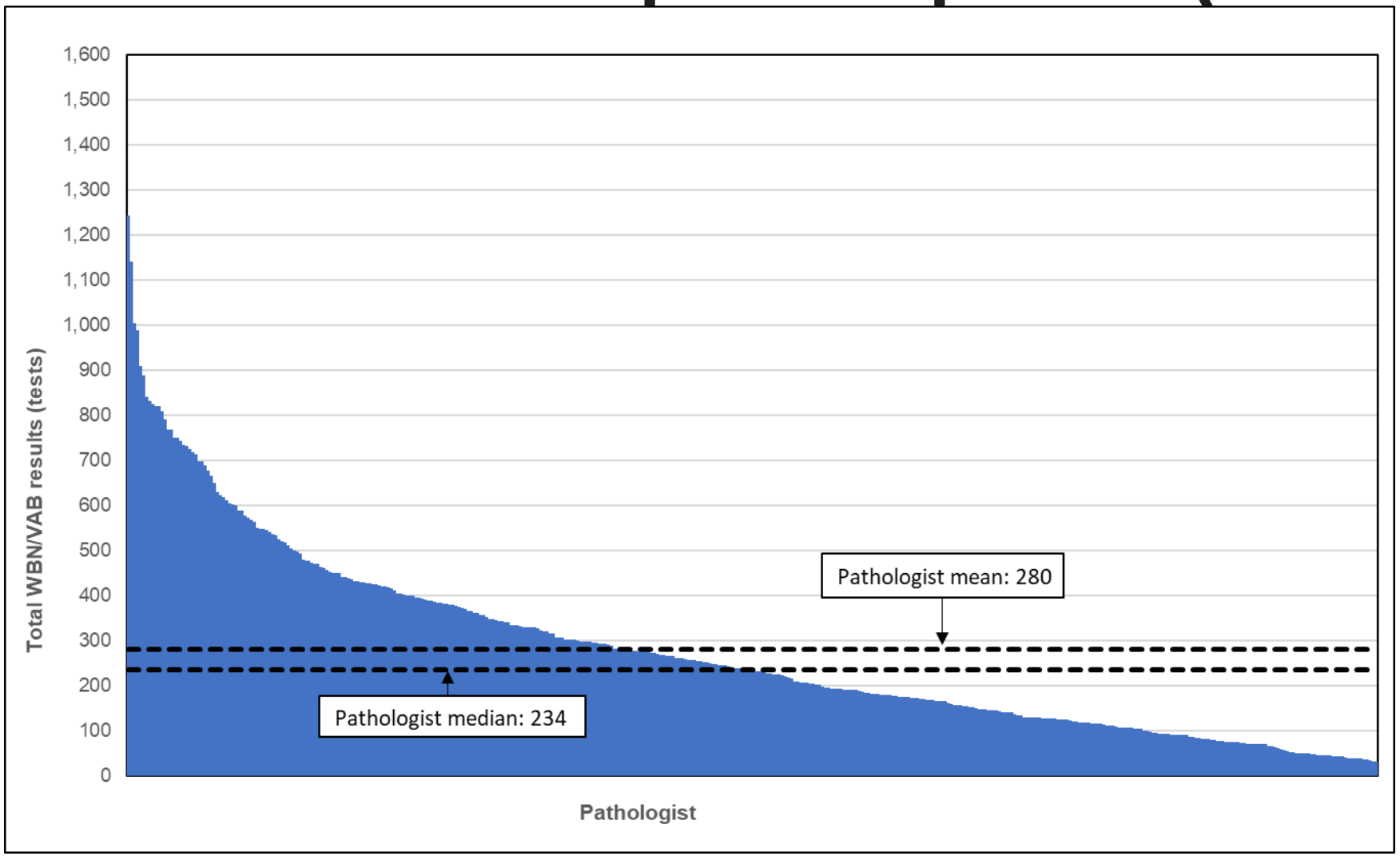
England average includes all cases

Pathologists

- Total biopsies reported by pathologists range from 31 to 1244 (median 234)
- Total B5 biopsies reported by pathologists range from 13 to 649 (median 109)

- The total B3 biopsies reported by pathologists range from 0 to 133 (median 18)
- 38 pathologists reported 1 to 4 B3 biopsies
- 1 pathologist reported no B3 biopsies (out of 70 total biopsies)

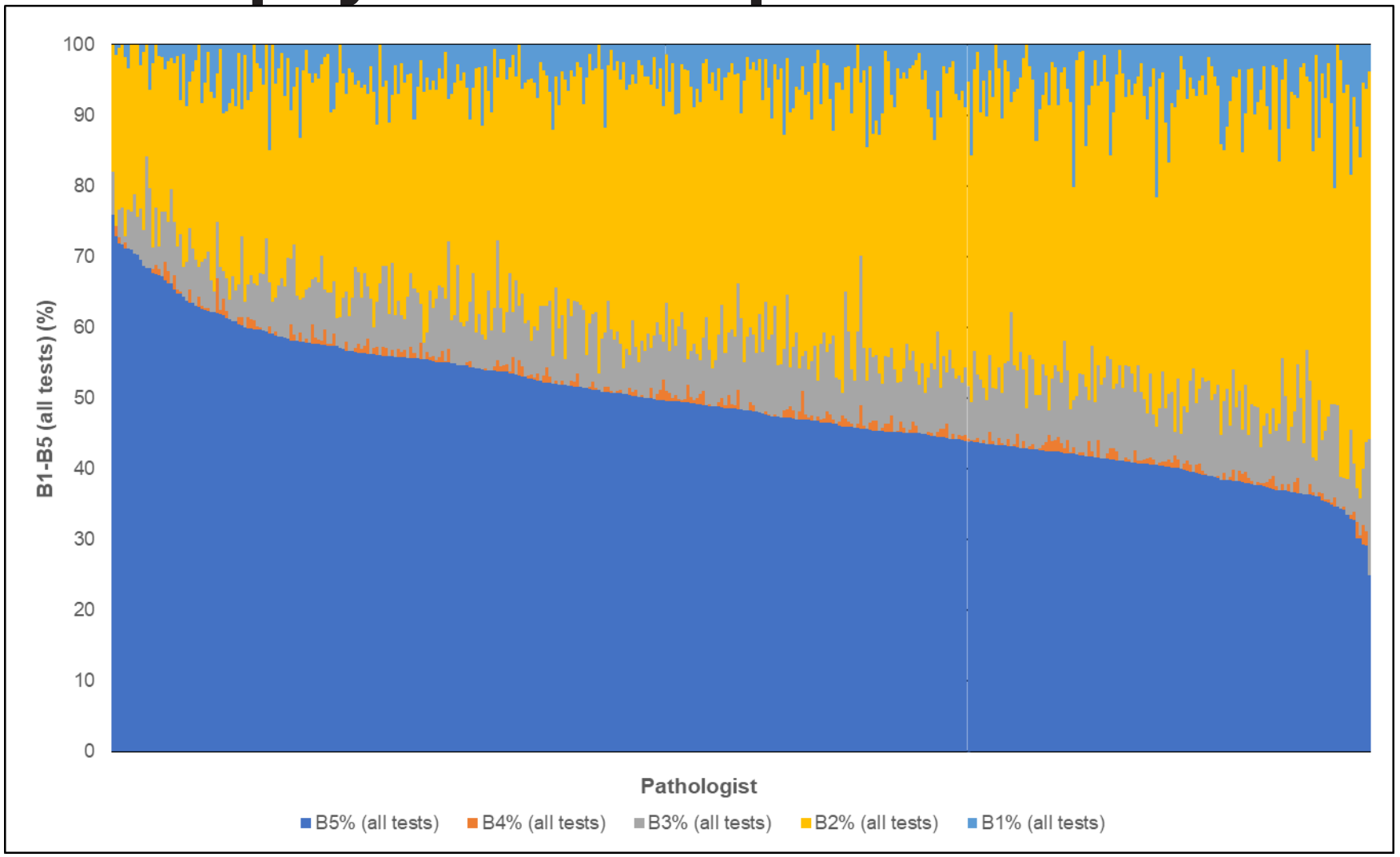
Number of core biopsies reported (all tests)



Check caseload data entry. Have cases been erroneously attributed to a particular pathologist?

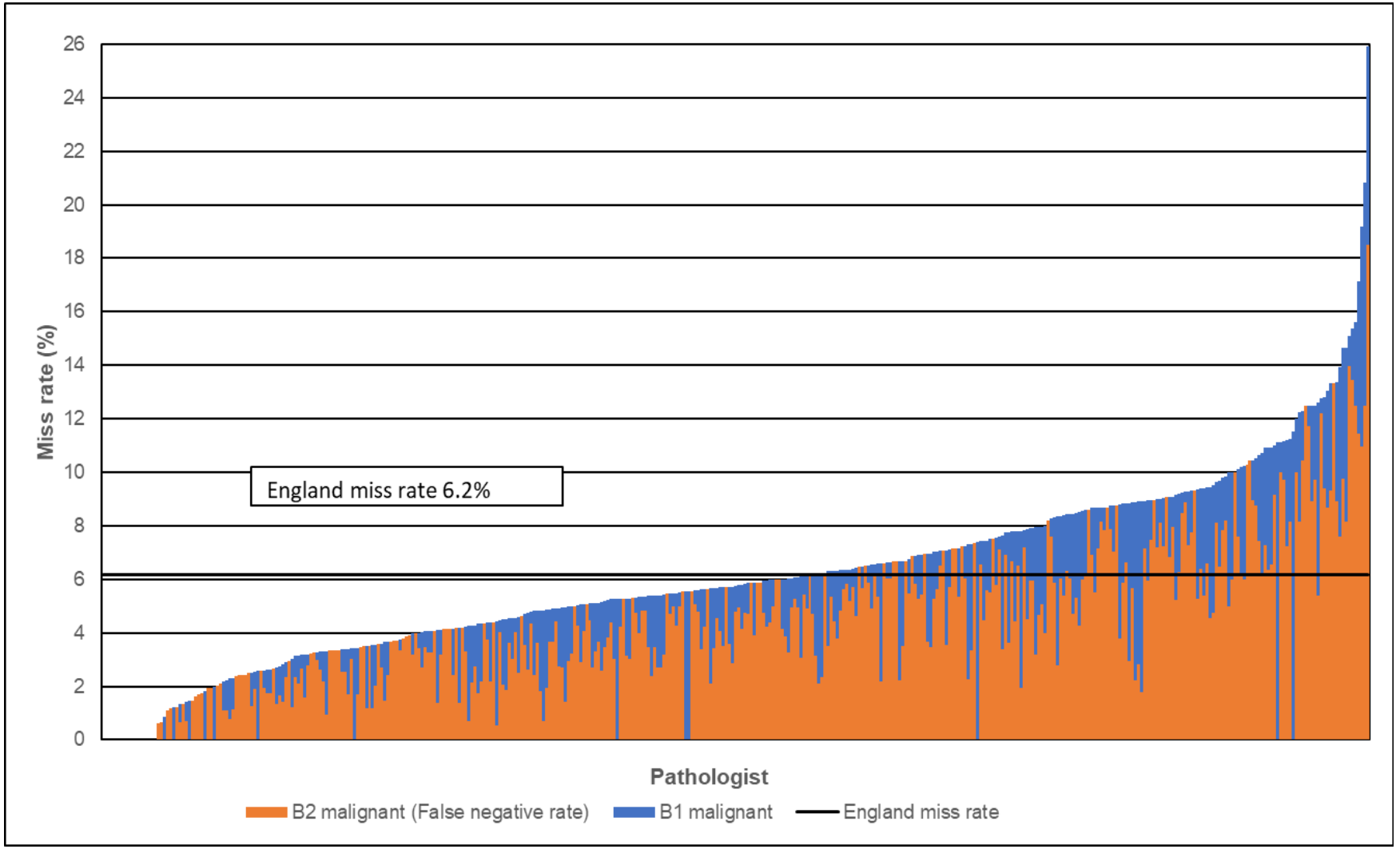
Range 31 to 1244

Core biopsy results reported as B1 to B5 (all tests)



England (all tests)
B1: 6.0%
B2: 37.0%
B3: 9.2%
B4: 0.7%
B5: 47.2%

Core biopsy miss rate (B1 and B2 malignant) (all tests)

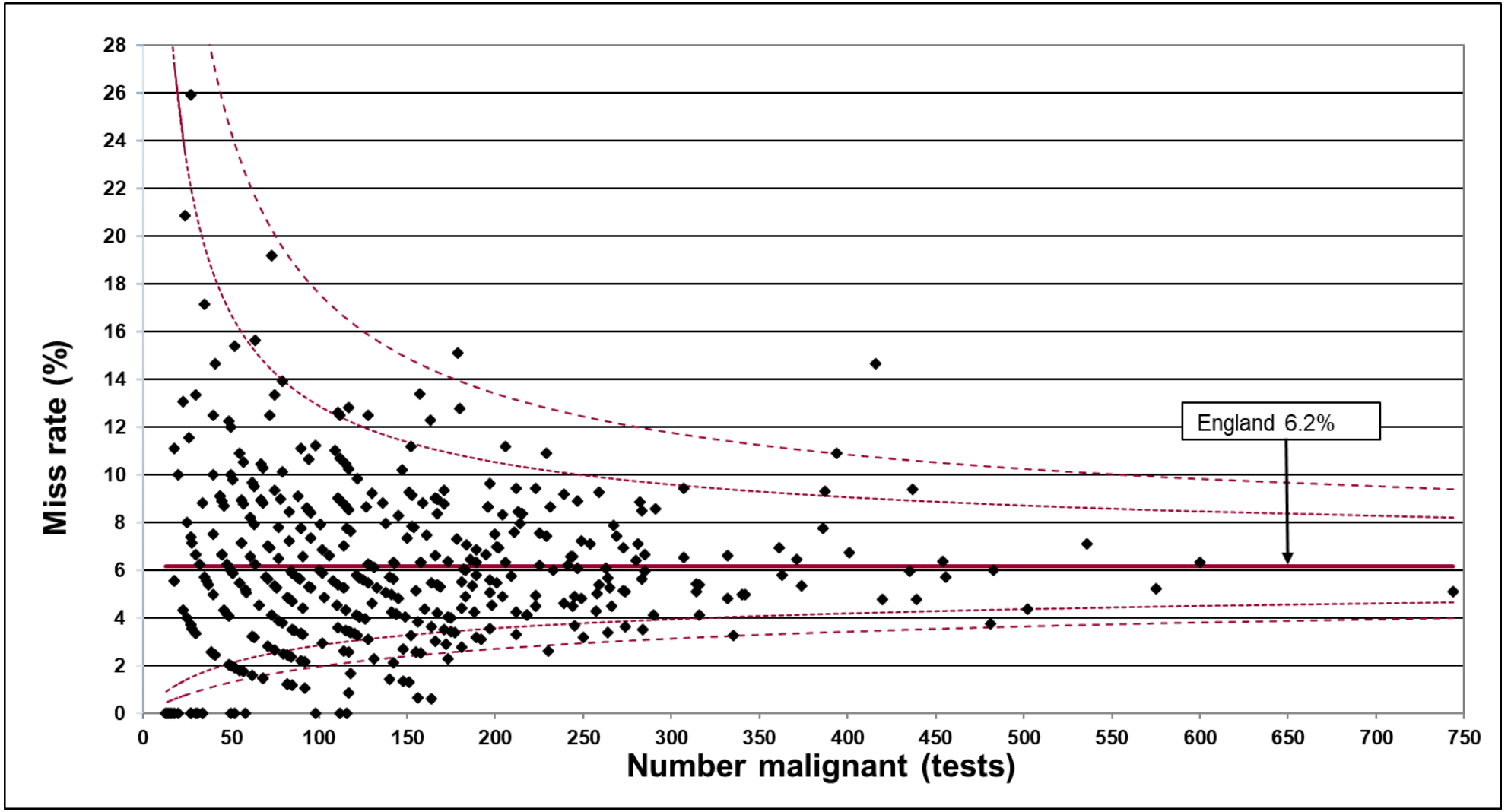


Miss rate range 0% to 25.9% (median 5.7%)

False negative rate range 0% to 18.5% (median 4.1%)

Core biopsy miss rate: B1 and B2 which were malignant at surgery as a proportion of number malignant (total malignant + B5 with no further histology)

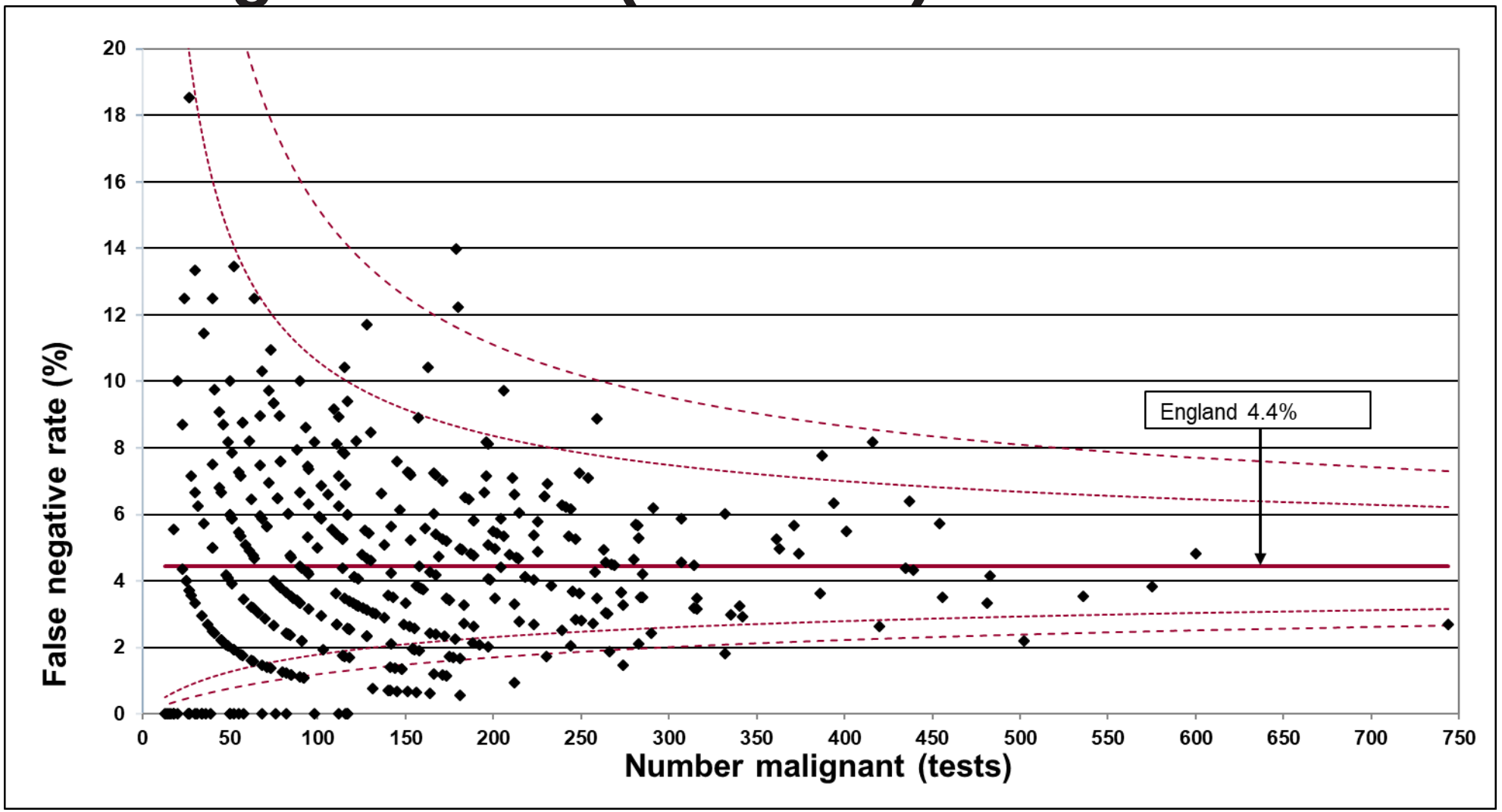
Core biopsy miss rate (B1 and B2 malignant) (all tests)



Range 0% to 25.9% (median 5.7%)

Acceptable standard: <5%, Achievable standard: <1% (all “clients” thresholds)

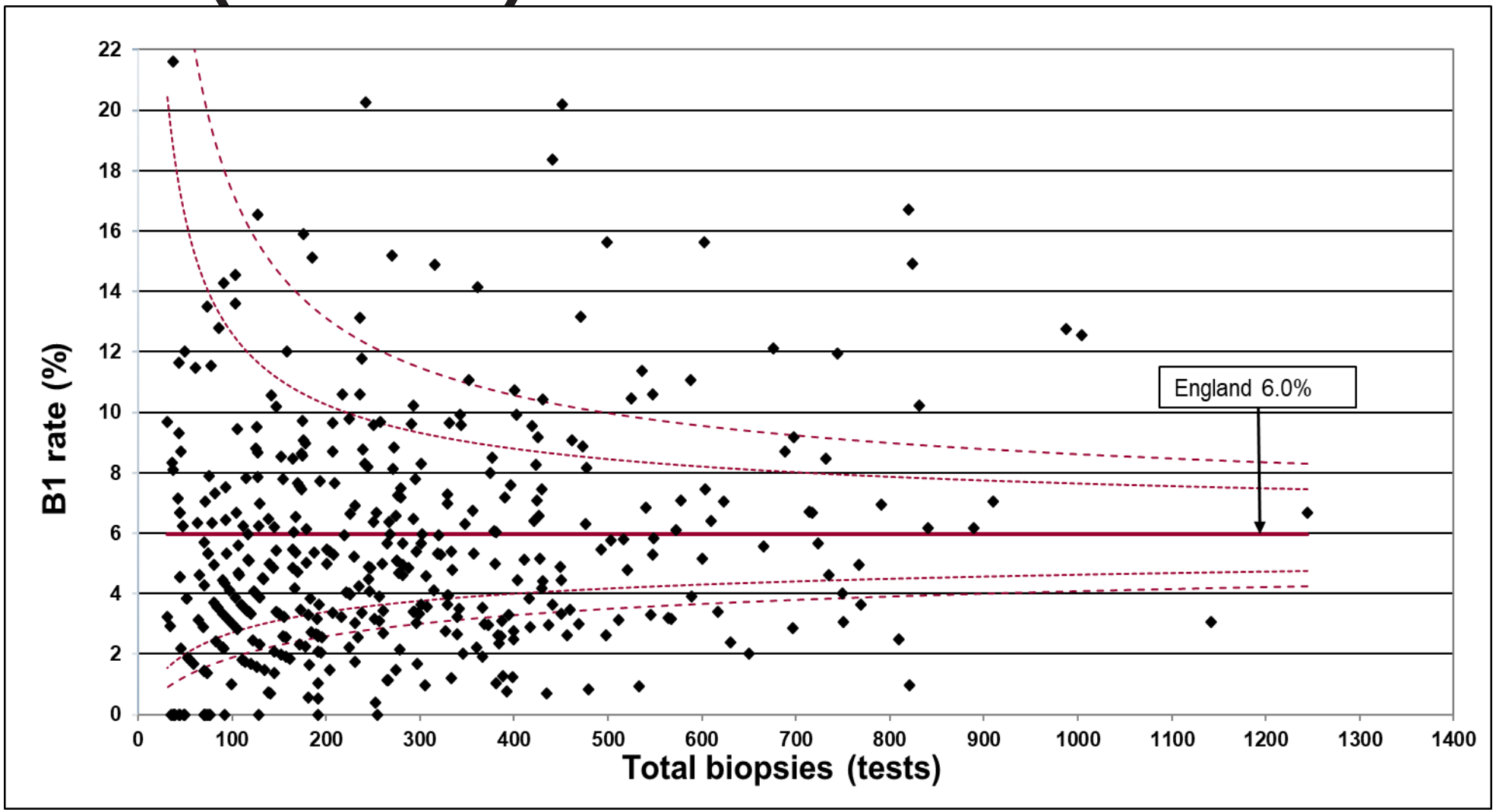
False negative rate (all tests)



Range 0% to 18.5% (median 4.1%)

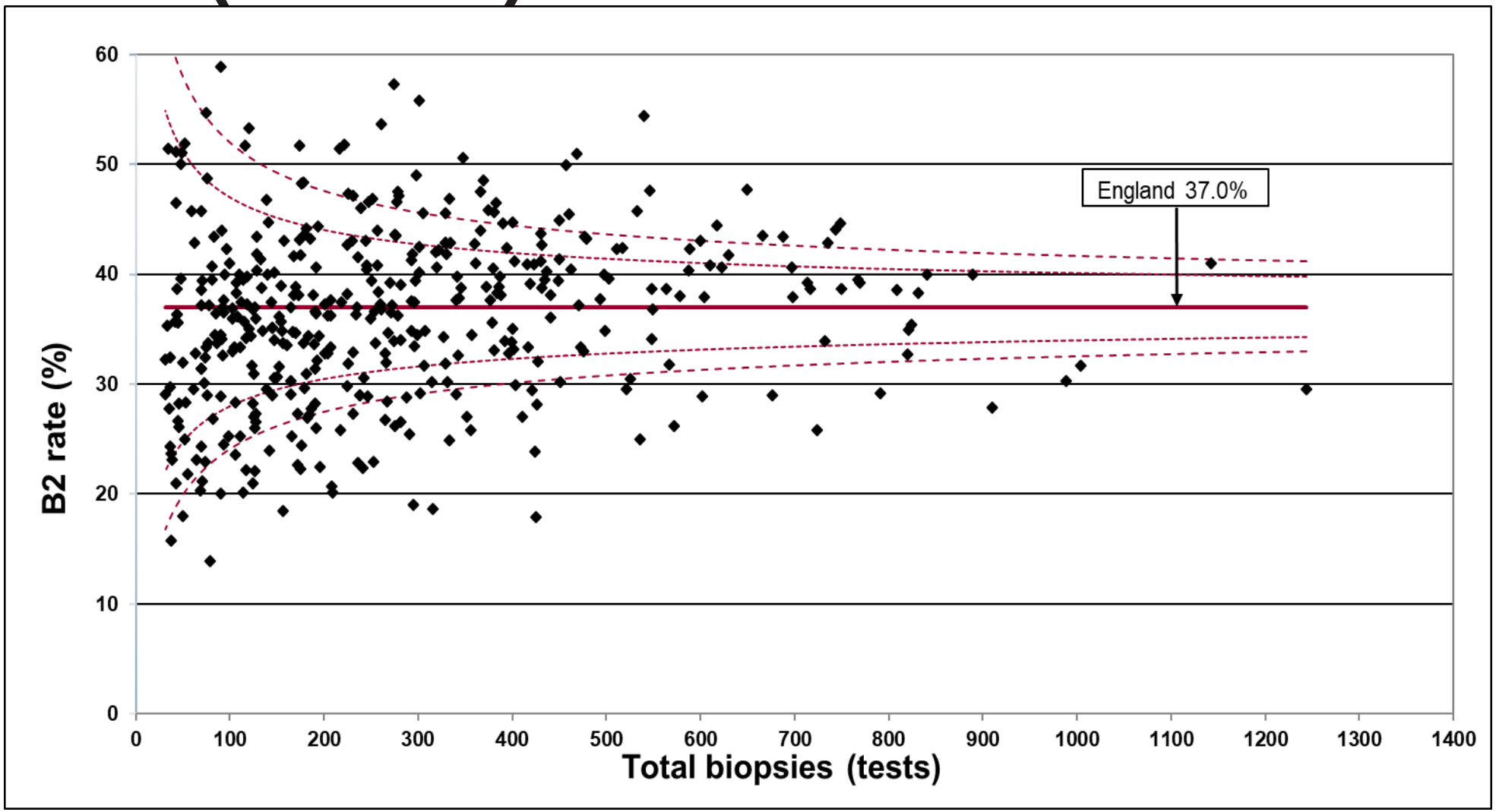
False negative rate : B2 which were malignant at surgery as a proportion of number malignant (total malignant + B5 with no further histology)

B1 rate (all tests)



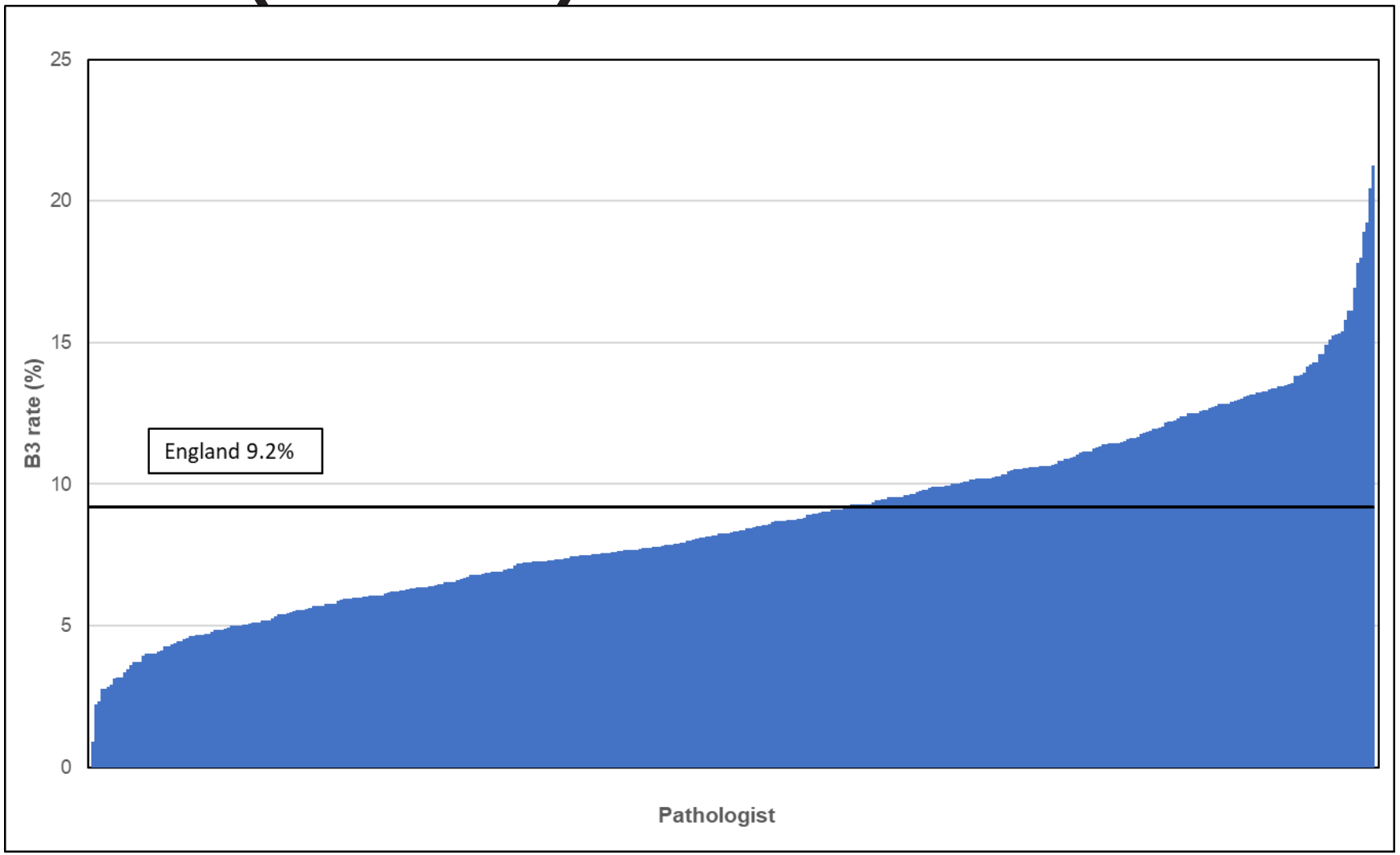
Range 0% to 21.6% (median 4.9%)

B2 rate (all tests)



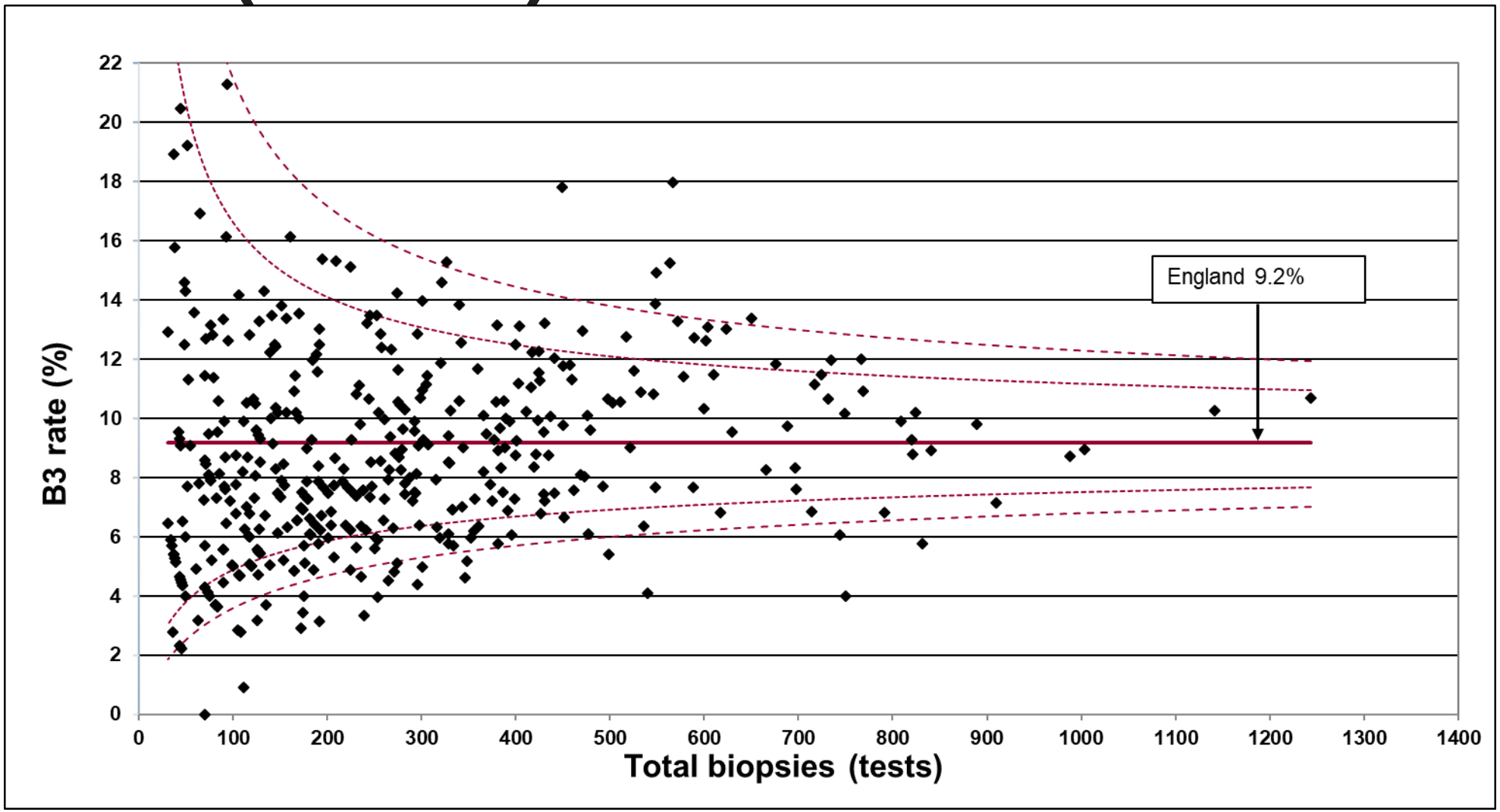
Range 13.9% to 58.9% (median 36.6%)

B3 Rate (all tests)



Range 0% to 21.3% (median 8.3%)

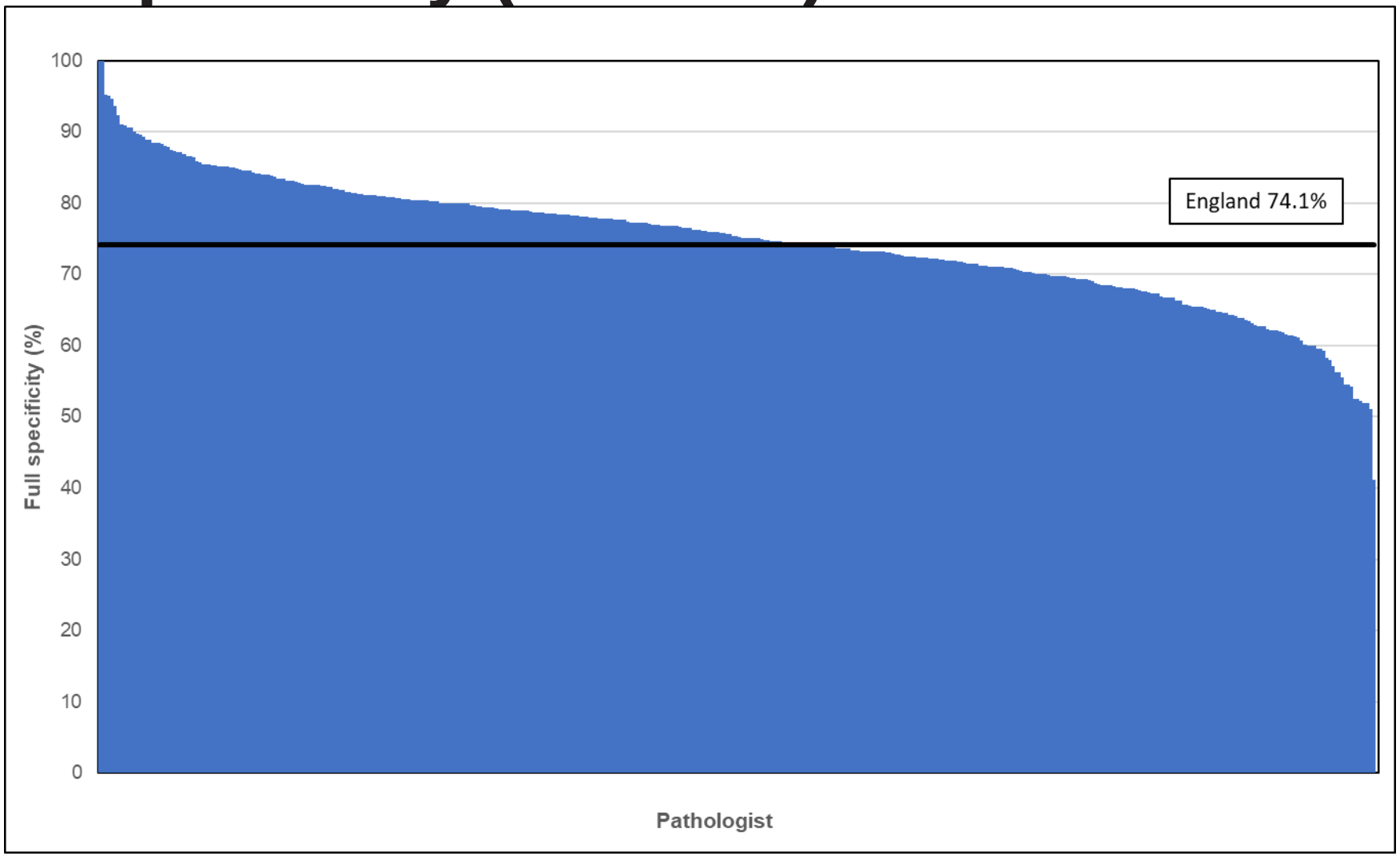
B3 Rate (all tests)



Range 0% to 21.3% (median 8.3%)

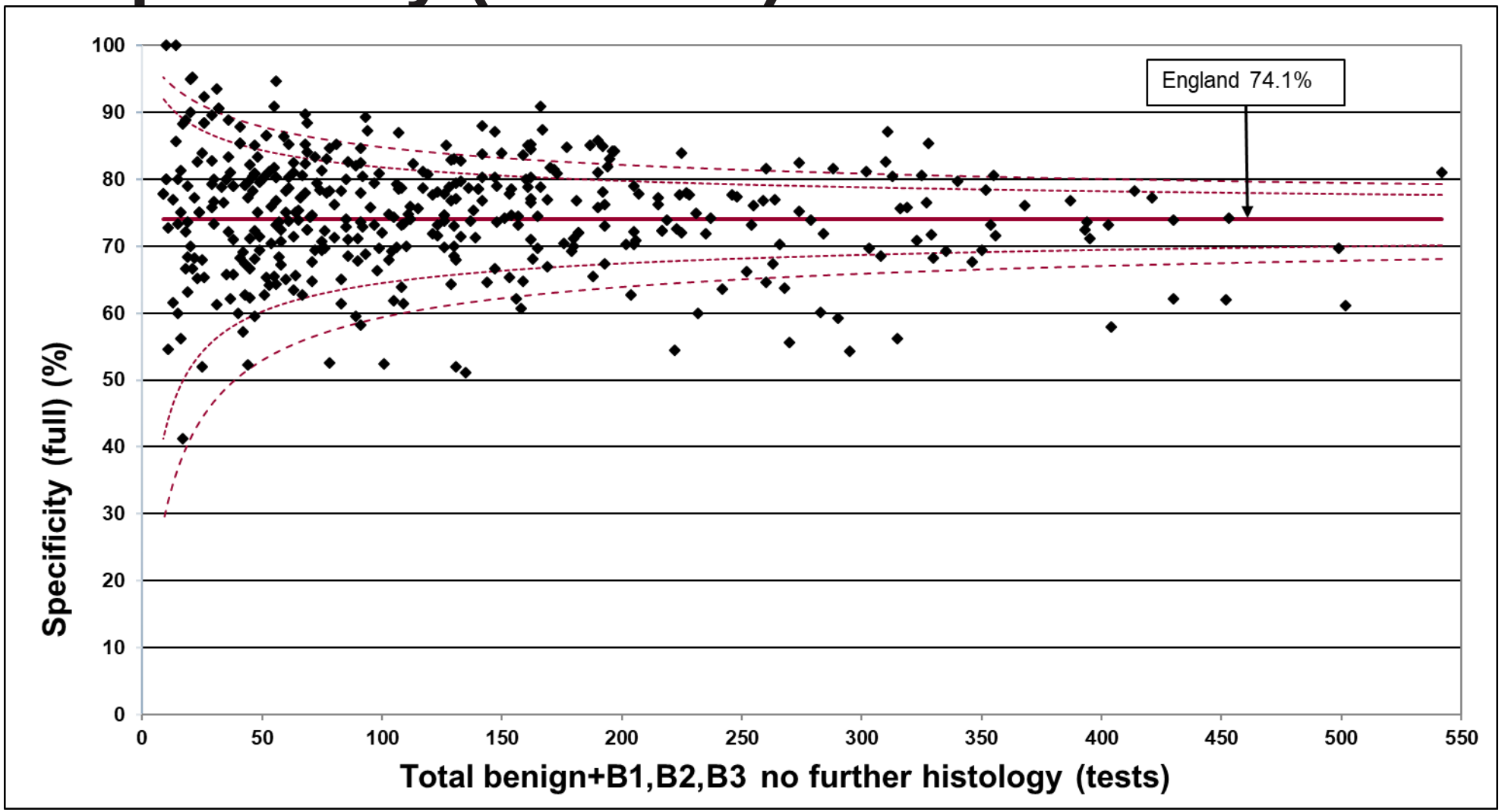
Acceptable rate: 4% - 9%, Achievable rate: 4.5% - 8.5% (thresholds apply to “all clients”)

Full specificity (all tests)



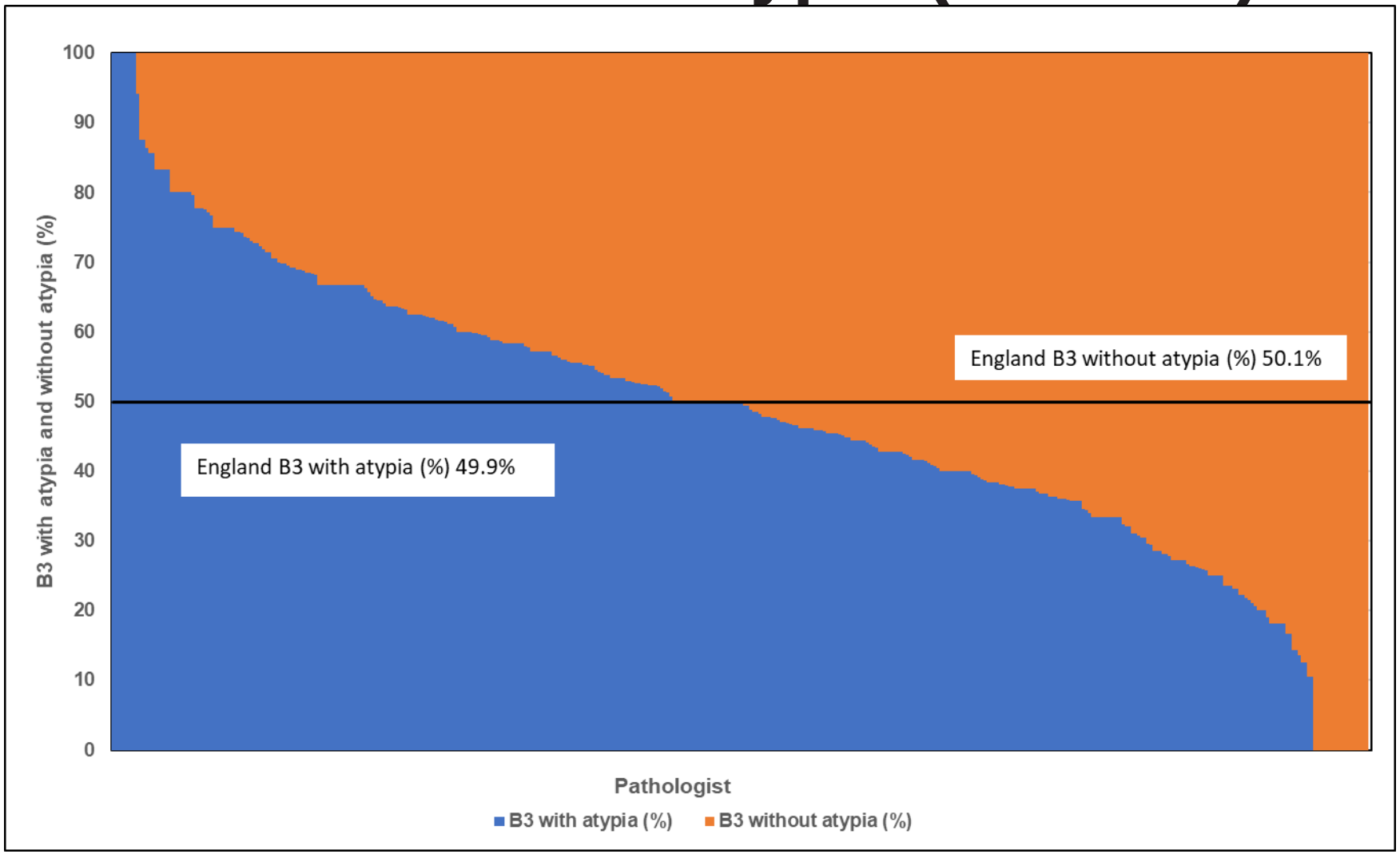
Range 41.2% to 100% (median 75.4%)

Full specificity (all tests)



Range 41.2% to 100% (median 75.4%)

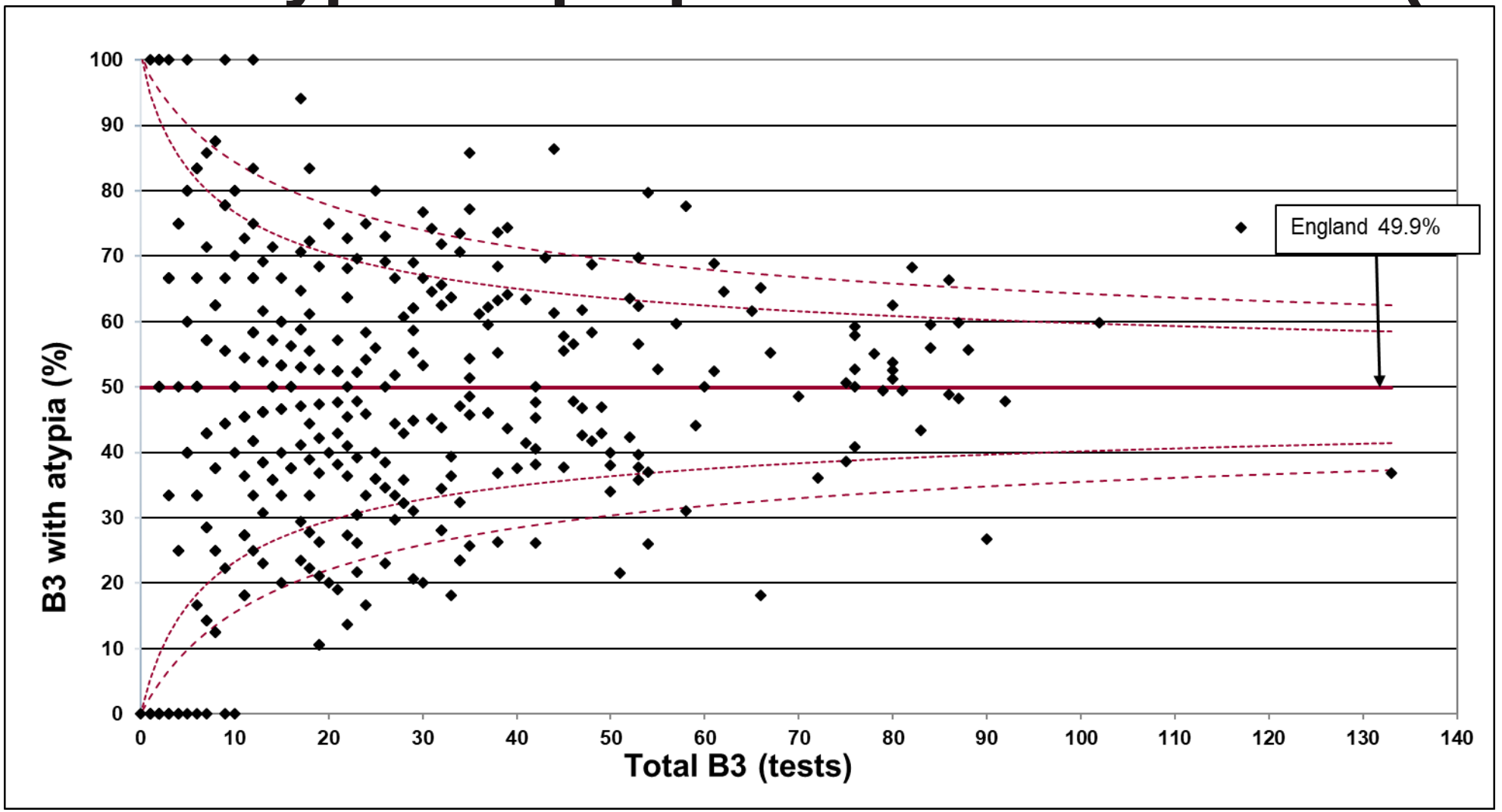
B3 with and without atypia (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 100% with atypia : 0% without atypia to 0% with atypia : 100% without atypia

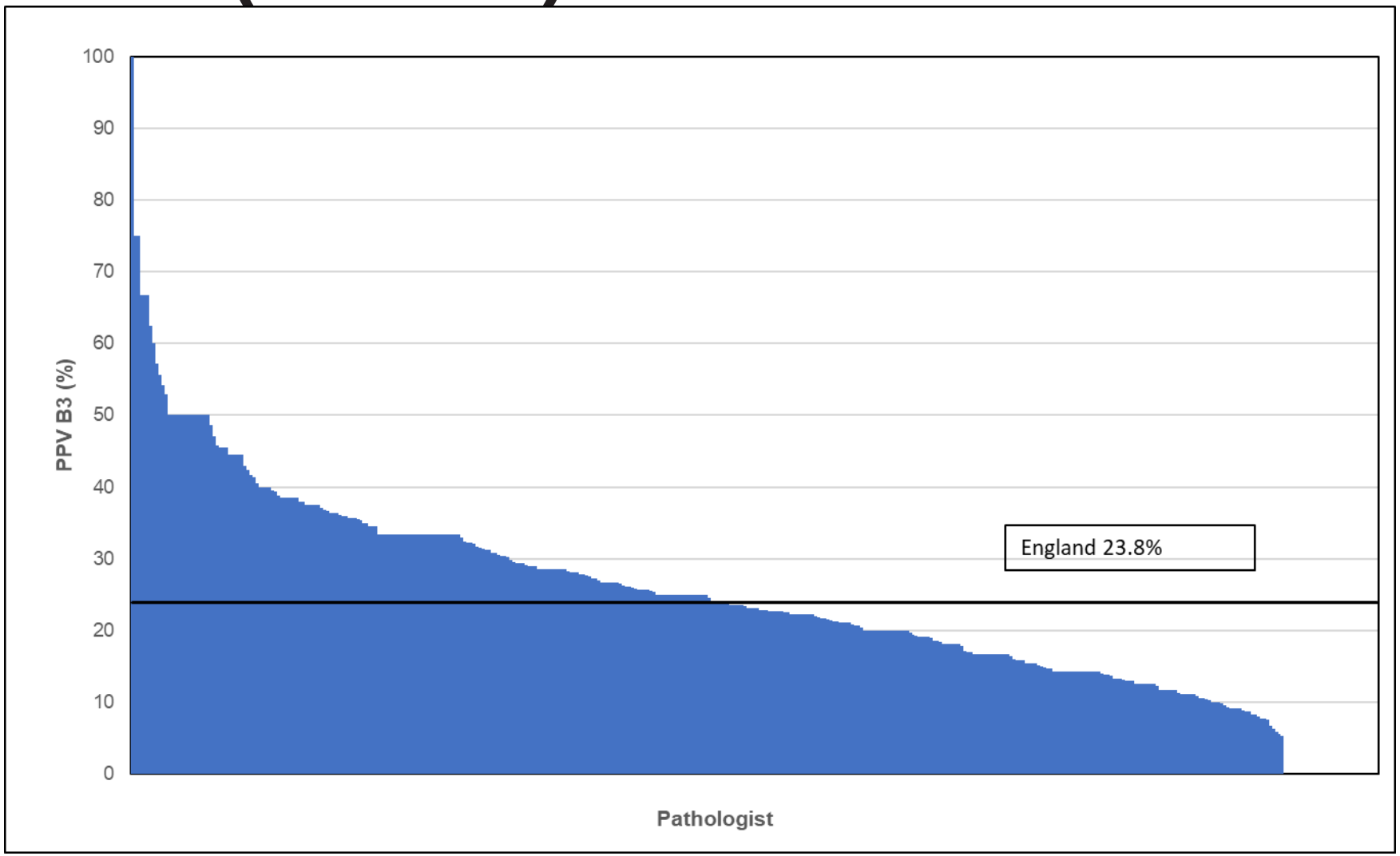
B3 with atypia as proportion of B3 results (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

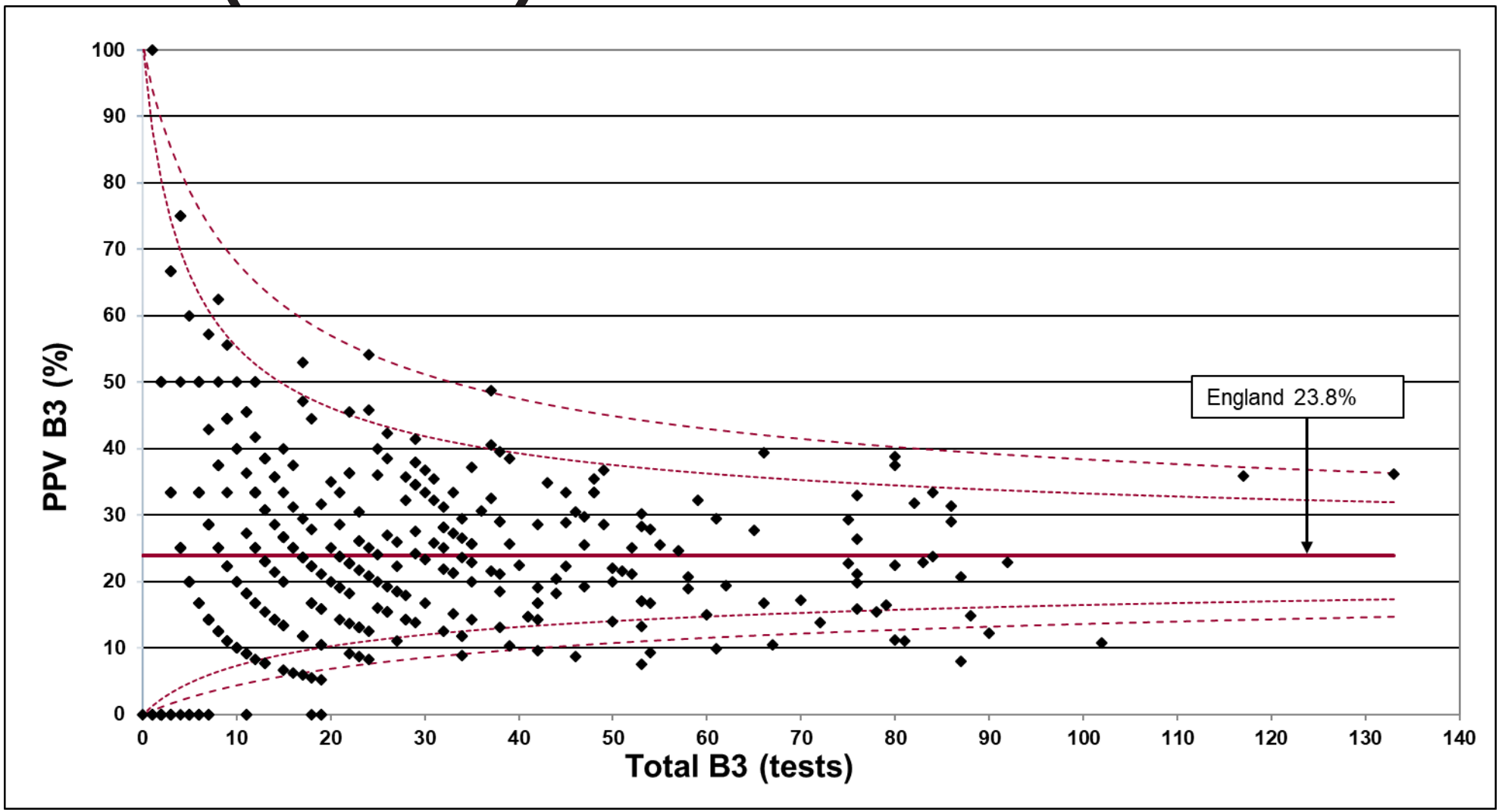
Range 0% to 100% (median 50.0%)

PPV B3 (all tests)



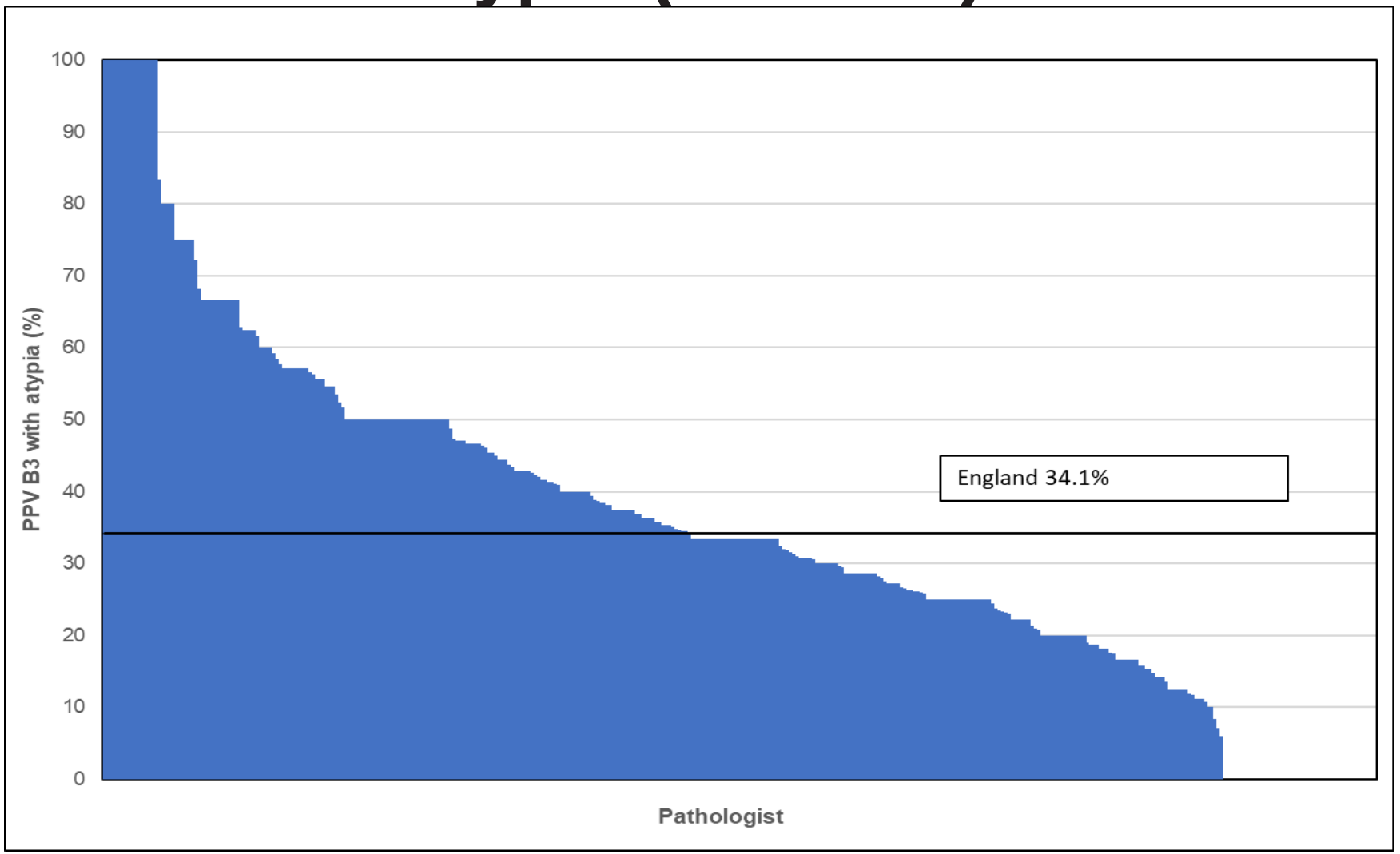
Range 0% to 100% (median 23.1%)

PPV B3 (all tests)



Range 0% to 100% (median 23.1%)

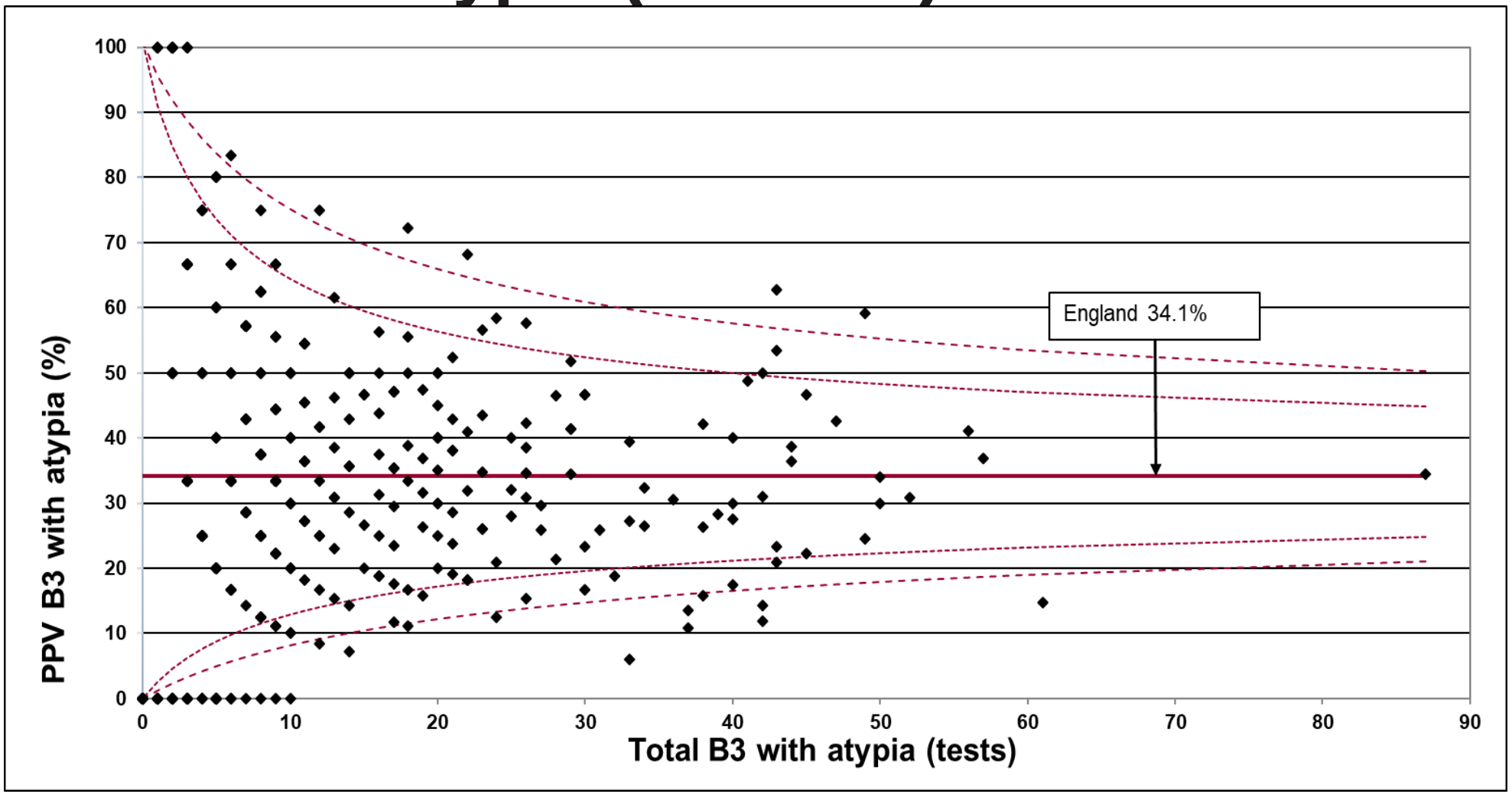
PPV B3 with atypia (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 100% (median 33.3%)

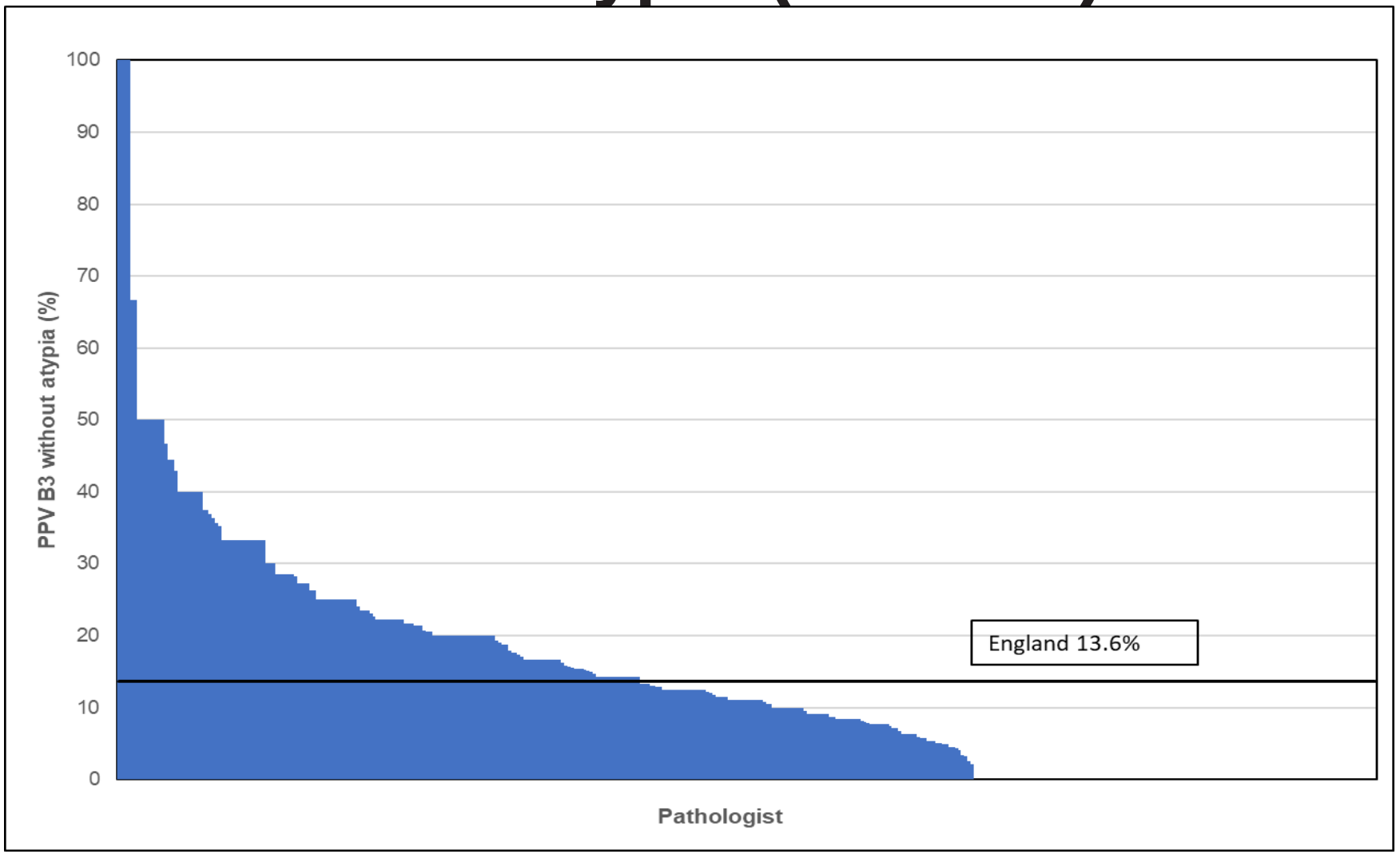
PPV B3 with atypia (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 100% (median 33.3%)

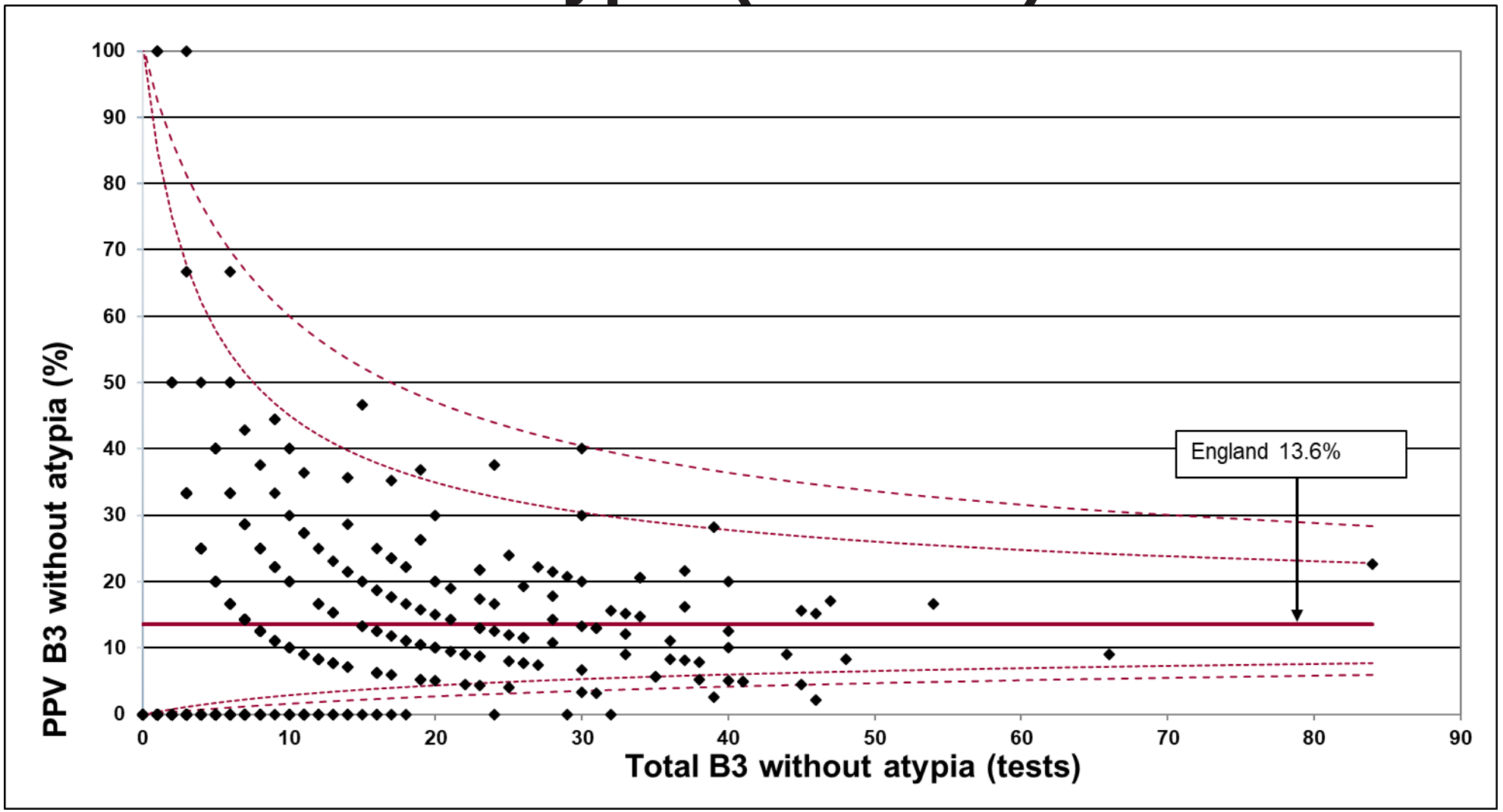
PPV B3 without atypia (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

Range 0% to 100% (median 11.1%)

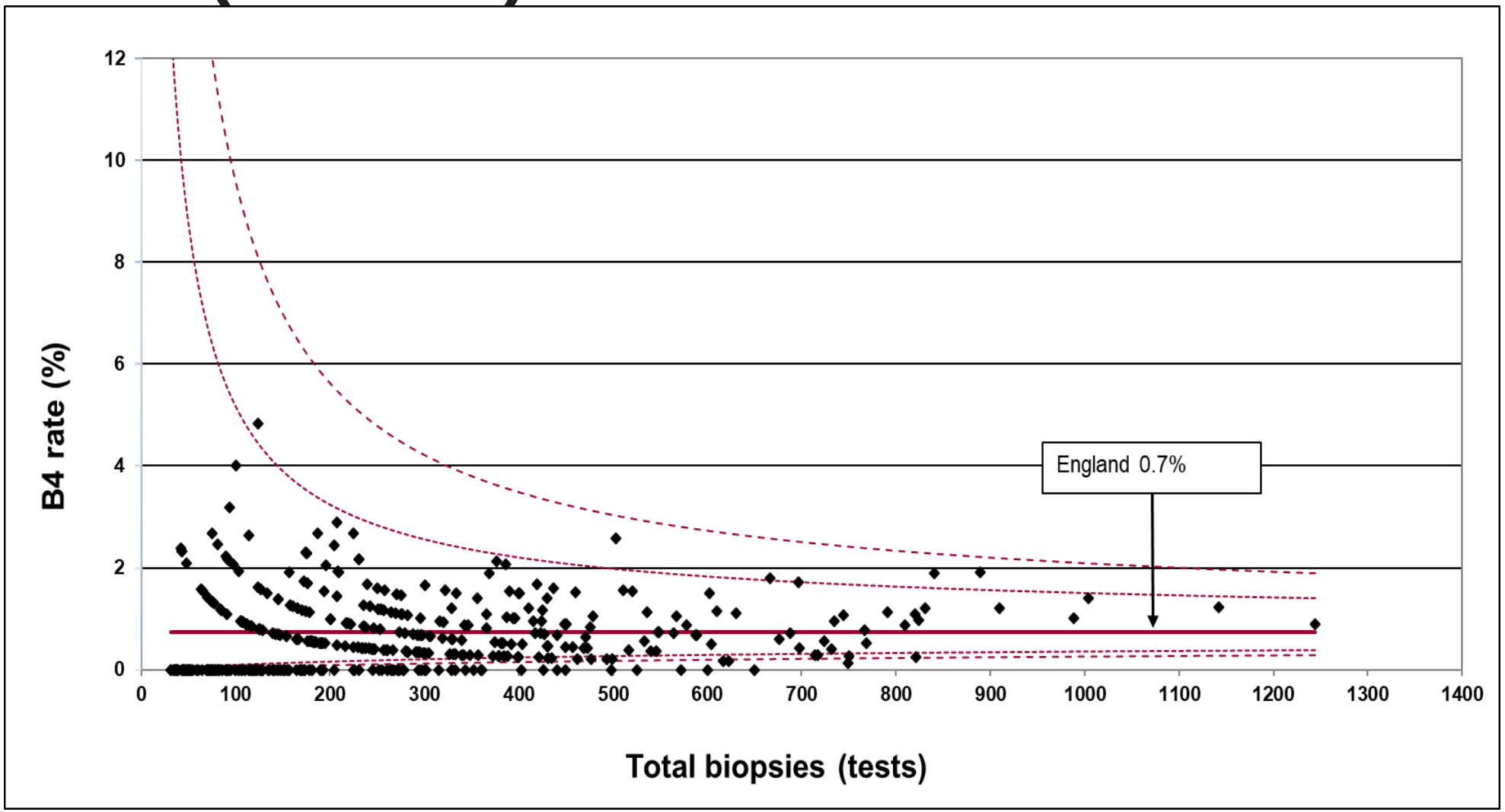
PPV B3 without atypia (all tests)



All services were asked to review B3 data entry for 2015-21. Has this improved data accuracy? See the Derby experience.

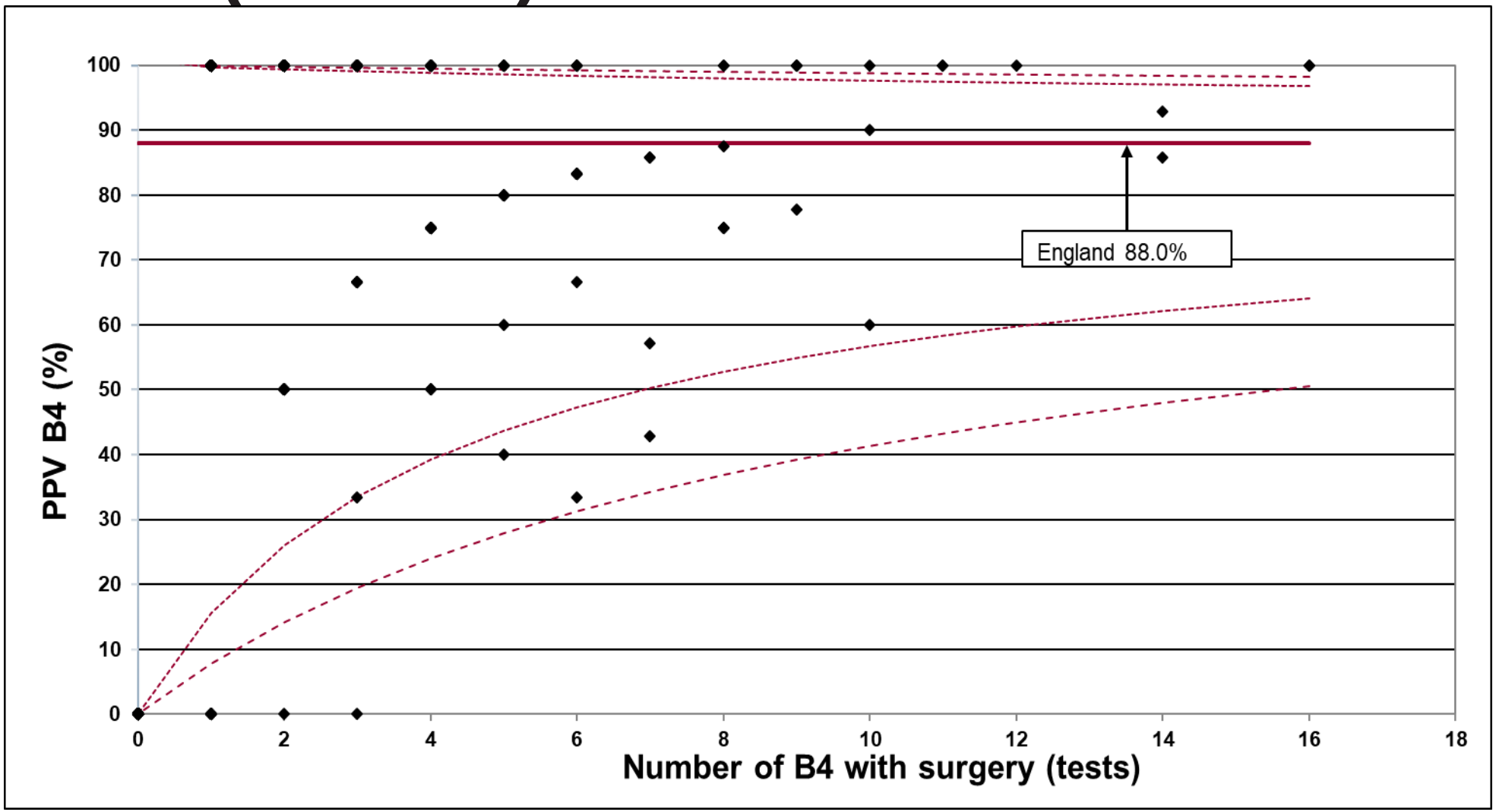
Range 0% to 100% (median 11.1%)

B4 rate (all tests)



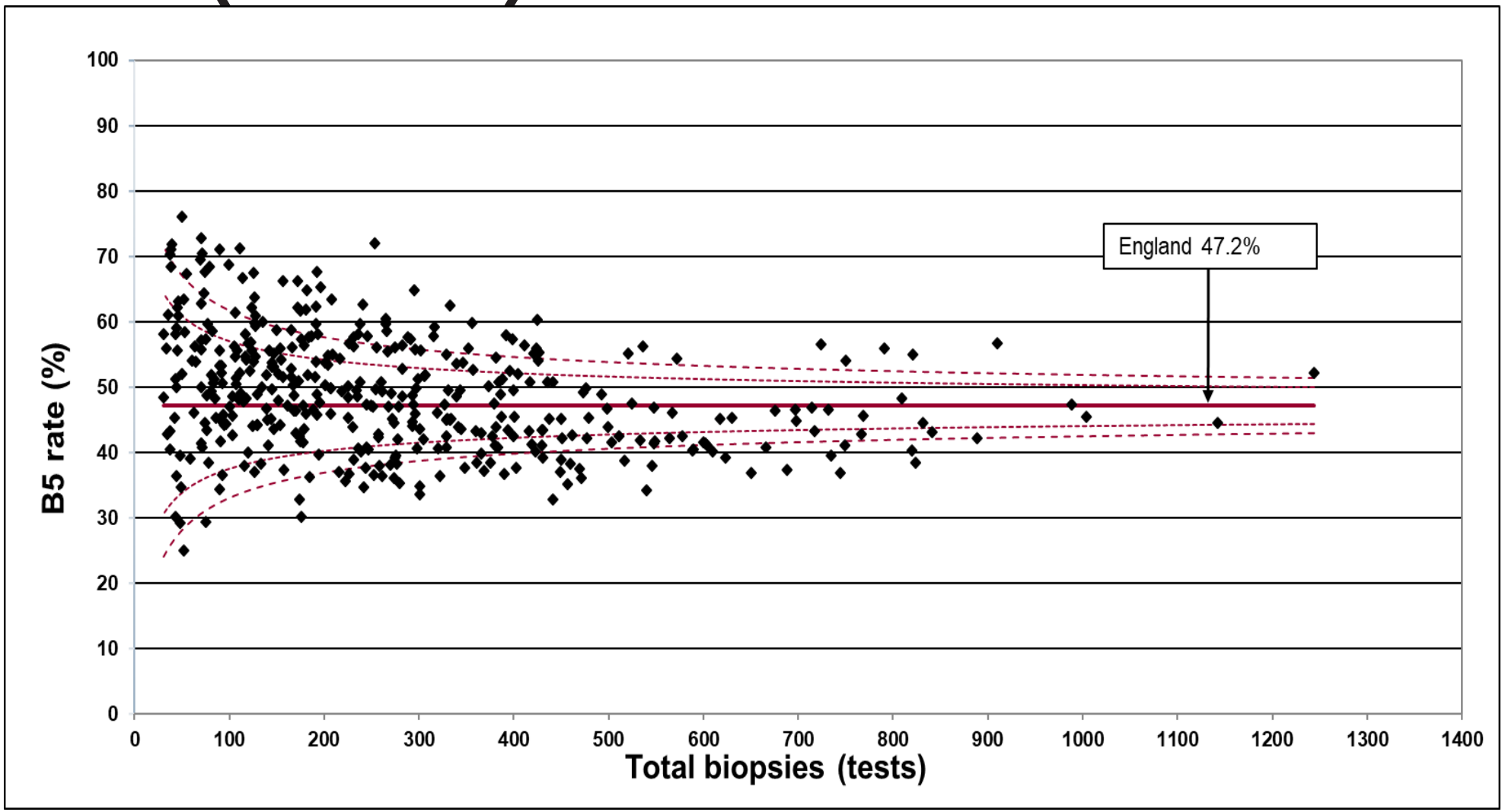
Range 0% to 4.8% (median 0.5%)

PPV B4 (all tests)



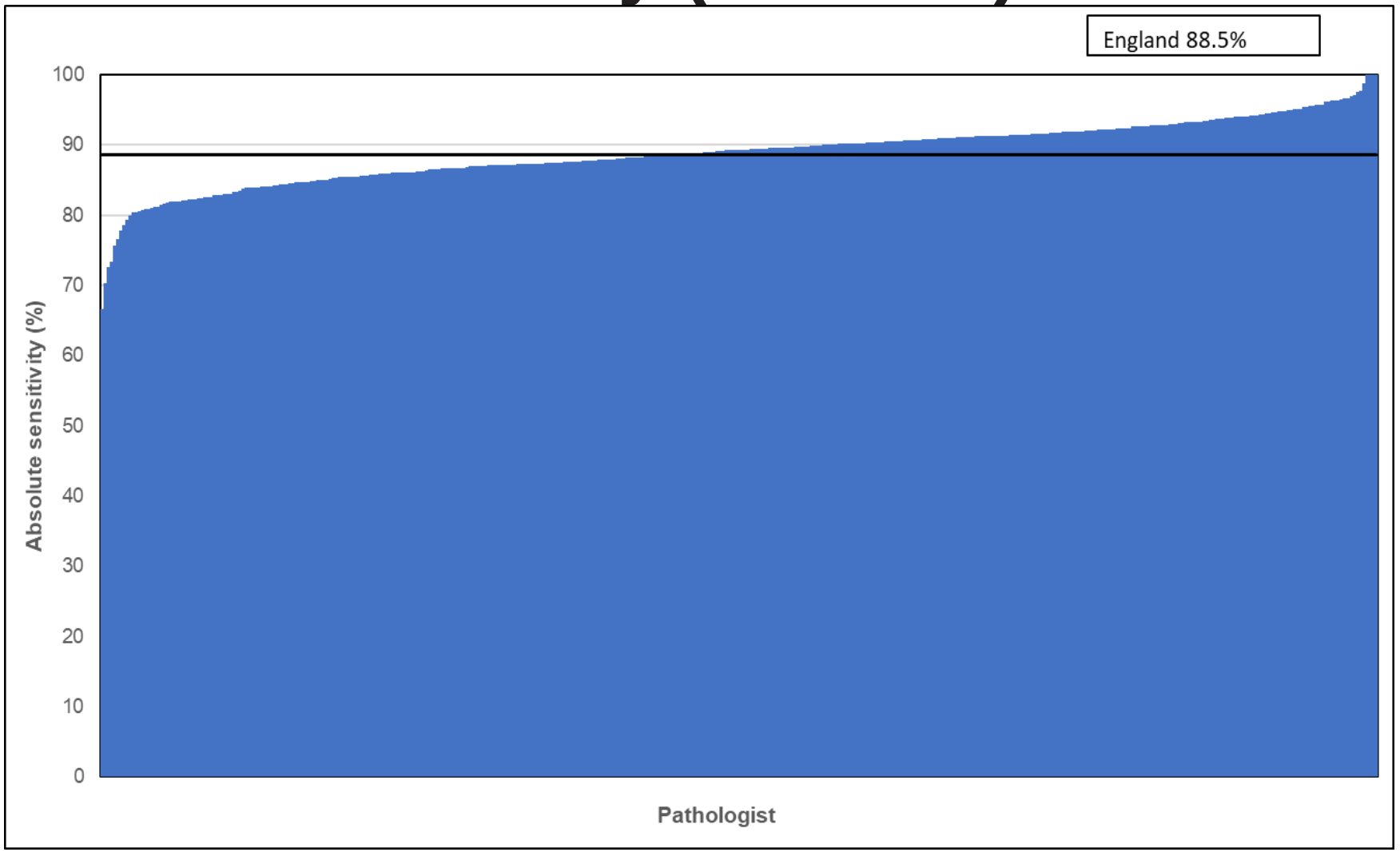
Range 0% to 100% (median 100%)

B5 rate (all tests)



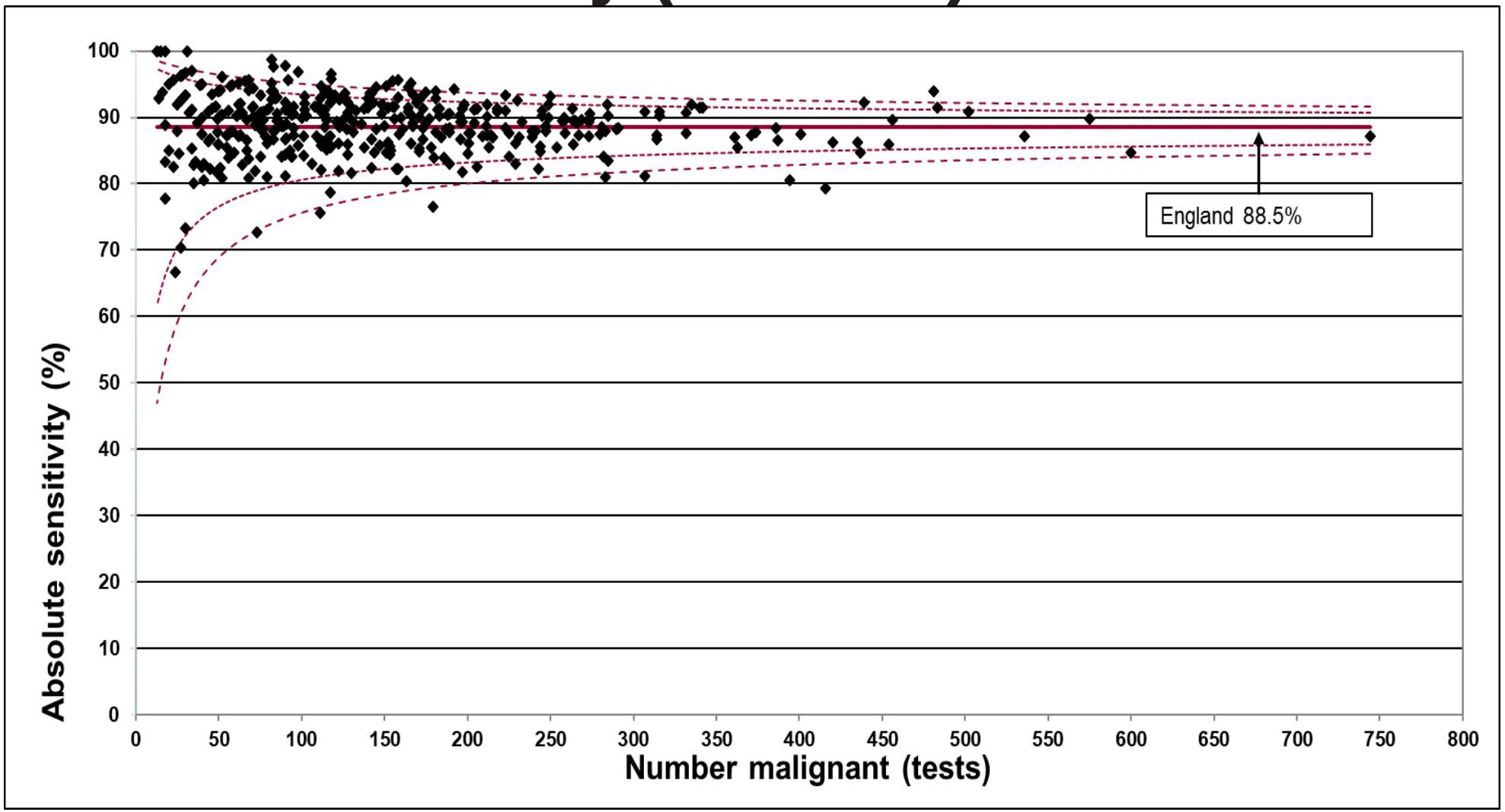
Range 25.0% to 76.0% (median 48.4%)

Absolute sensitivity (all tests)



Range 66.7% to 100% (median 89.3%)

Absolute sensitivity (all tests)



Range 66.7% to 100% (median 89.3%)

References

Breast Screening: quality assurance guidelines for breast pathology services (September 2020) https://www.gov.uk/government/publications/breast-screening-quality-assurance-guidelines-for-breast-pathology-services/breast-screening-quality-assurance-guidelines-for-screening-pathology-services

Guidelines for non-operative diagnostic procedures and reporting in breast cancer screening (August 2021) G150-Non-op-reporting-breast-cancer-screening.pdf (rcpath.org)

Breast screening: how to record vacuum-assisted excisions (October 2018) https://www.gov.uk/government/publications/breast-screening-how-to-record-vacuum-assisted-excisions

NHS Breast Screening multidisciplinary working group guidelines for the diagnosis and management of breast lesions of uncertain malignant potential on core biopsy (B3 lesions) Pinder, S.E. et al. Clinical Radiology, Volume 73, Issue 8, p682 - 692, August 2018 doi:10.1016/j.crad.2018.04.004