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# Update on the National Lung Cancer Audit


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**Burton Hospitals NHS Foundation Trust**
**Royal College of Physicians**

# Topics

- Initial 2009 data
- Variation
- Age
- Pathology
- How is the data being used?
- The Future

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# 2009 DATA

National Lung Cancer Audit

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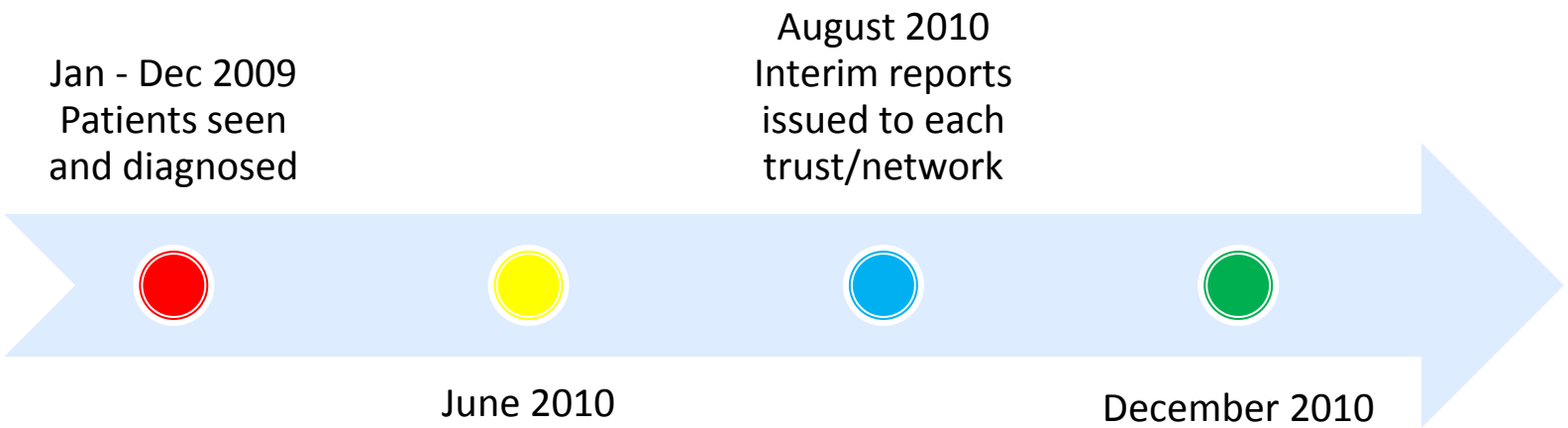
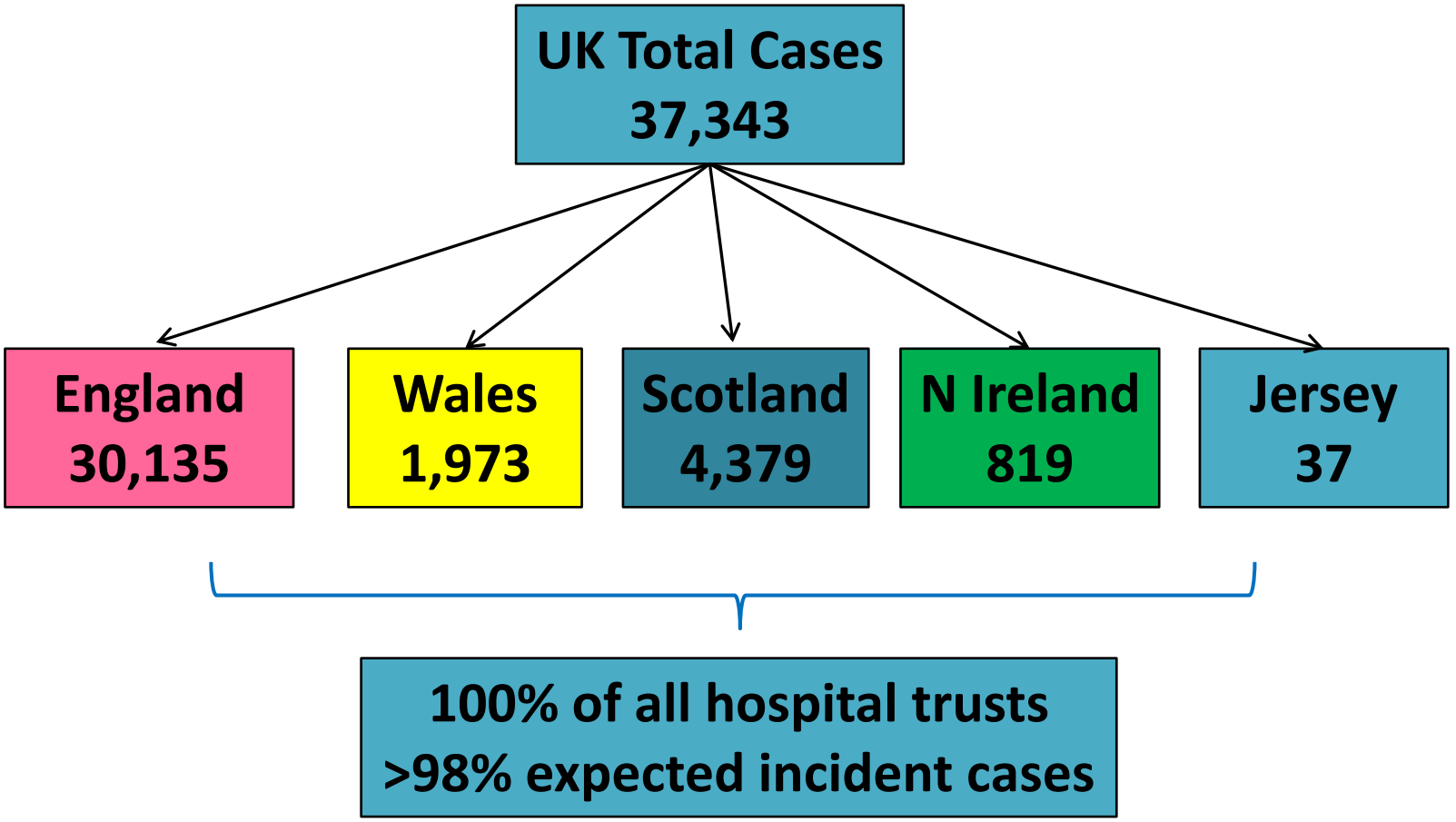
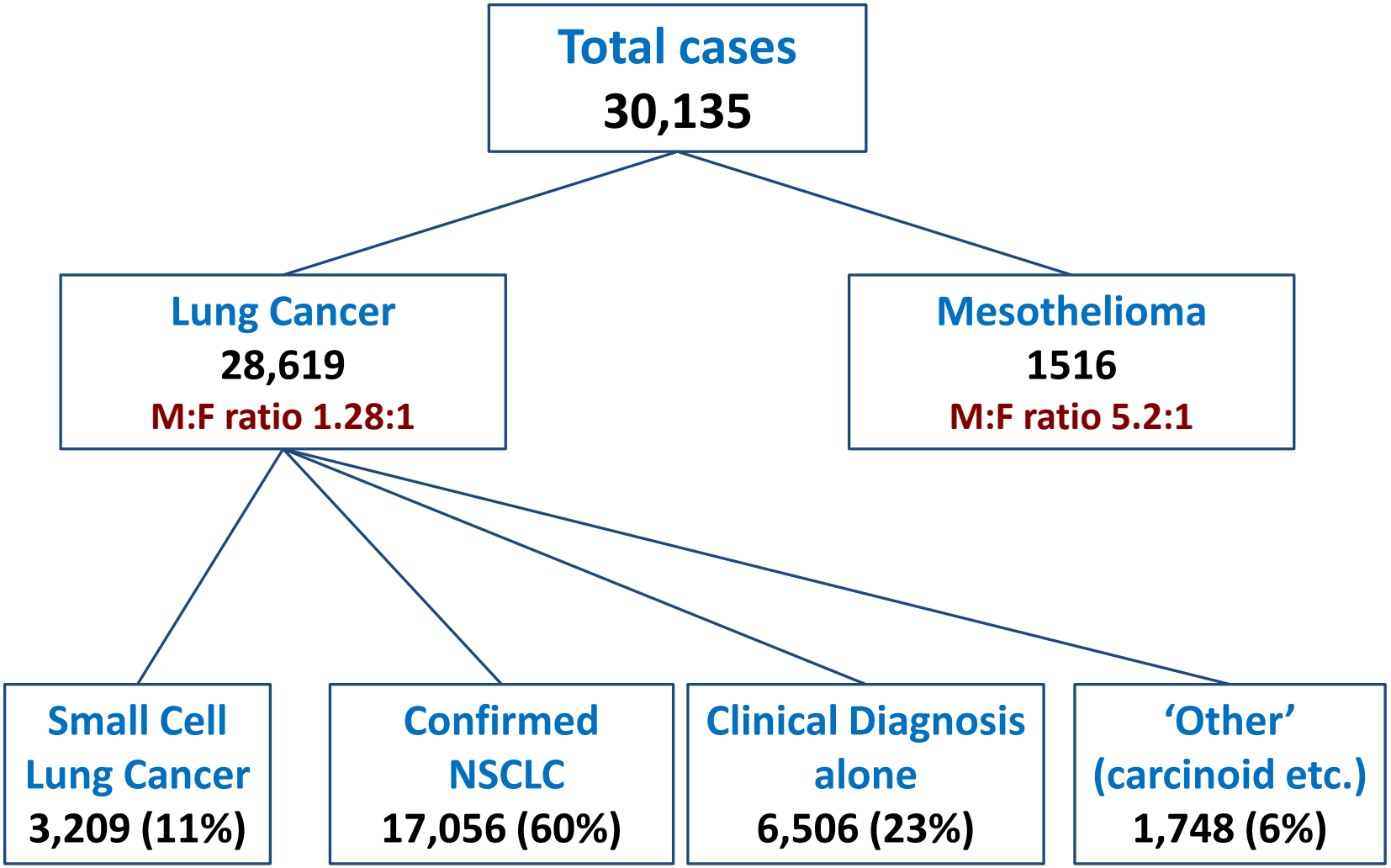
# Reporting Cycle



# Overall Patient Numbers



# Case Breakdown (England)



# Case Ascertainment and Data Completeness (England)

| | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| **Case Ascertainment** | | | | | |
| Trusts submitting data | **77%** | **93%** | **96.5%** | **98.1%** | **100%** |
| Number of cases | **10,920** | **16,922** | **20,639** | **27,818** | **30,135** |
| Case ascertainment | **40%** | **66%** | **75%** | **92%** | **98%** |
| **Data completeness** | | | | | |
| Stage | **51%** | **55%** | **70%** | **77%** | **81%** |
| Performance status | **66%** | **77%** | **80%** | **87%** | **78%** |
| Treatment | **66%** | **72%** | **79%** | **82%** | **89%** |

# Distribution of Stage (TNM v6) and PS*

| Stage | n | % |
|---|---|---|
| IA | 1,294 | 6.1 |
| 1B | 1,774 | 8.4 |
| IIA | 170 | 0.8 |
| IIB | 1,135 | 5.4 |
| IIIA | 2,052 | 9.7 |
| IIIB | 4,120 | 19.5 |
| IV | 10,593 | 50.1 |

| PS | n | % |
|---|---|---|
| 0 | 4,680 | 19.8 |
| 1 | 7,912 | 33.4 |
| 2 | 5,086 | 21.5 |
| 3 | 4,503 | 19 |
| 4 | 1,478 | 6.3 |

***Where recorded**

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# Headline Indicators

| Country | HCR | Active treatment | Resection rate | Chemo in SCLC |
|---|---|---|---|---|
| **England** | **75.9%** | **59.2%** | **13.9%** | **65.4%** |
| **Scotland** | **77.7%** | **64.1%** | **11.3%** | **68.9%** |
| **Wales** | **70.9%** | **56.9%** | **10.6%** | |

| **England** | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|
| Case ascertainment (%) | **40** | **66** | **75** | **92** | **>97** |
| % discussed at MDT | **79** | **84.3** | **86.8** | **88.6** | **93.8** |
| Tissue confirmation rate (%) | **68** | **66** | **65** | **66.7** | **75.9** |
| Overall surgical resection rate (%) | **9** | **9.4** | **10.3** | **11.2** | **13.9** |
| Resection rate: confirmed NSCLC (%) | **13.8** | **14.3** | **15.2** | **16.0** | **18.4** |
| Active treatment rate (%) | **45** | **50** | **52** | **54** | **59.2** |
| Small Cell chemotherapy rate (%) | **57.7** | **61.7** | **64.5** | **63.0** | **65.4** |

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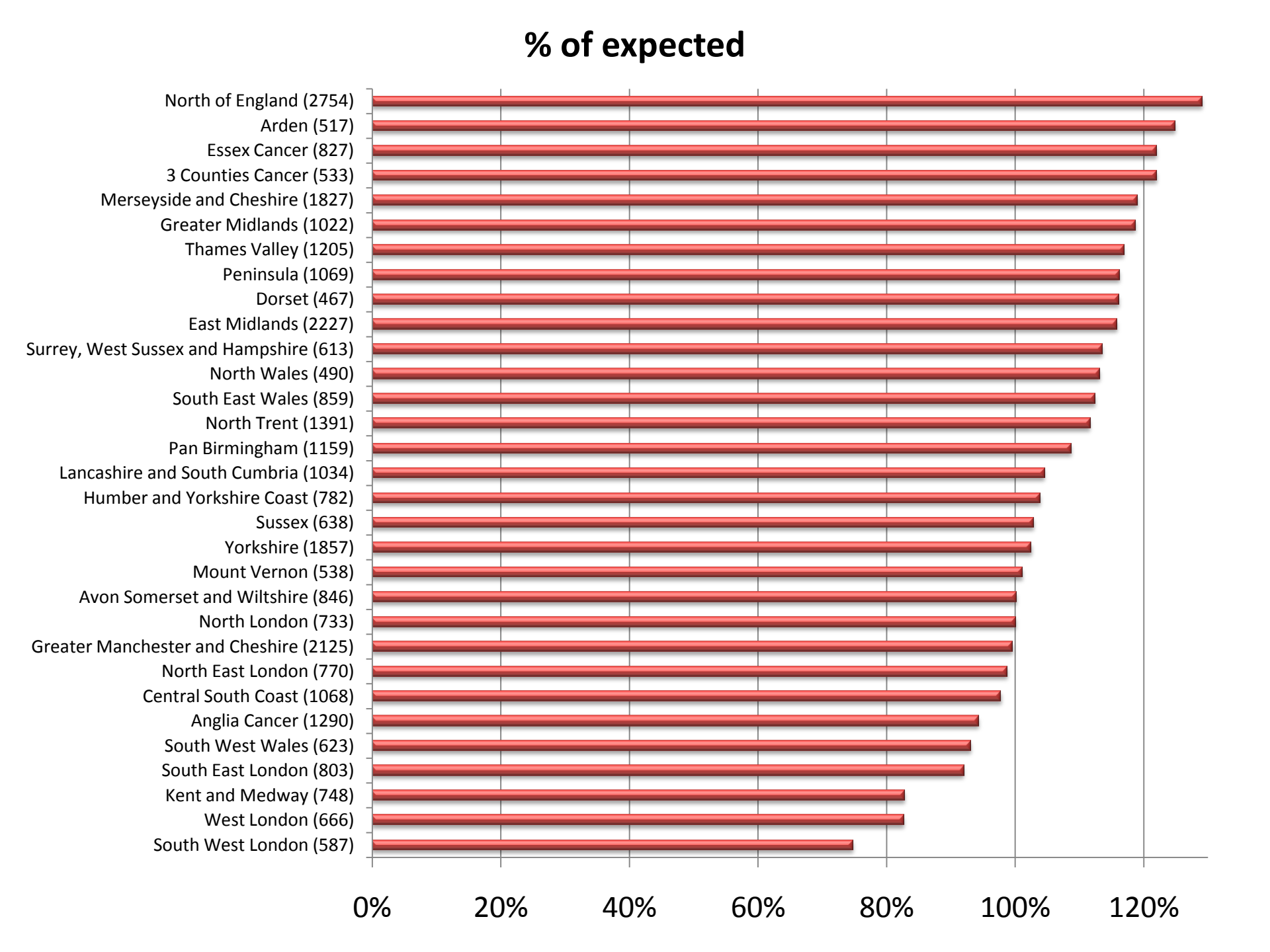
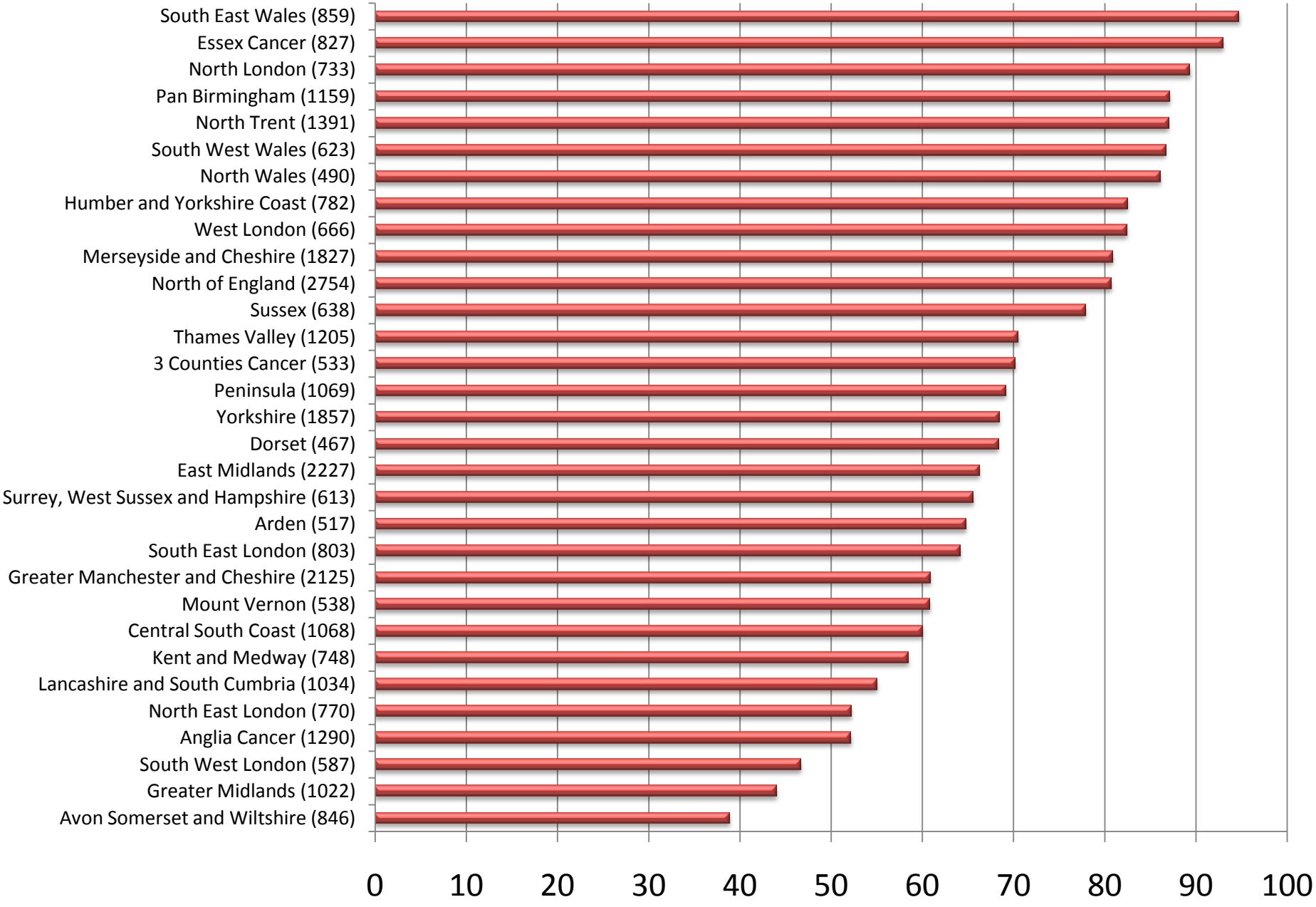
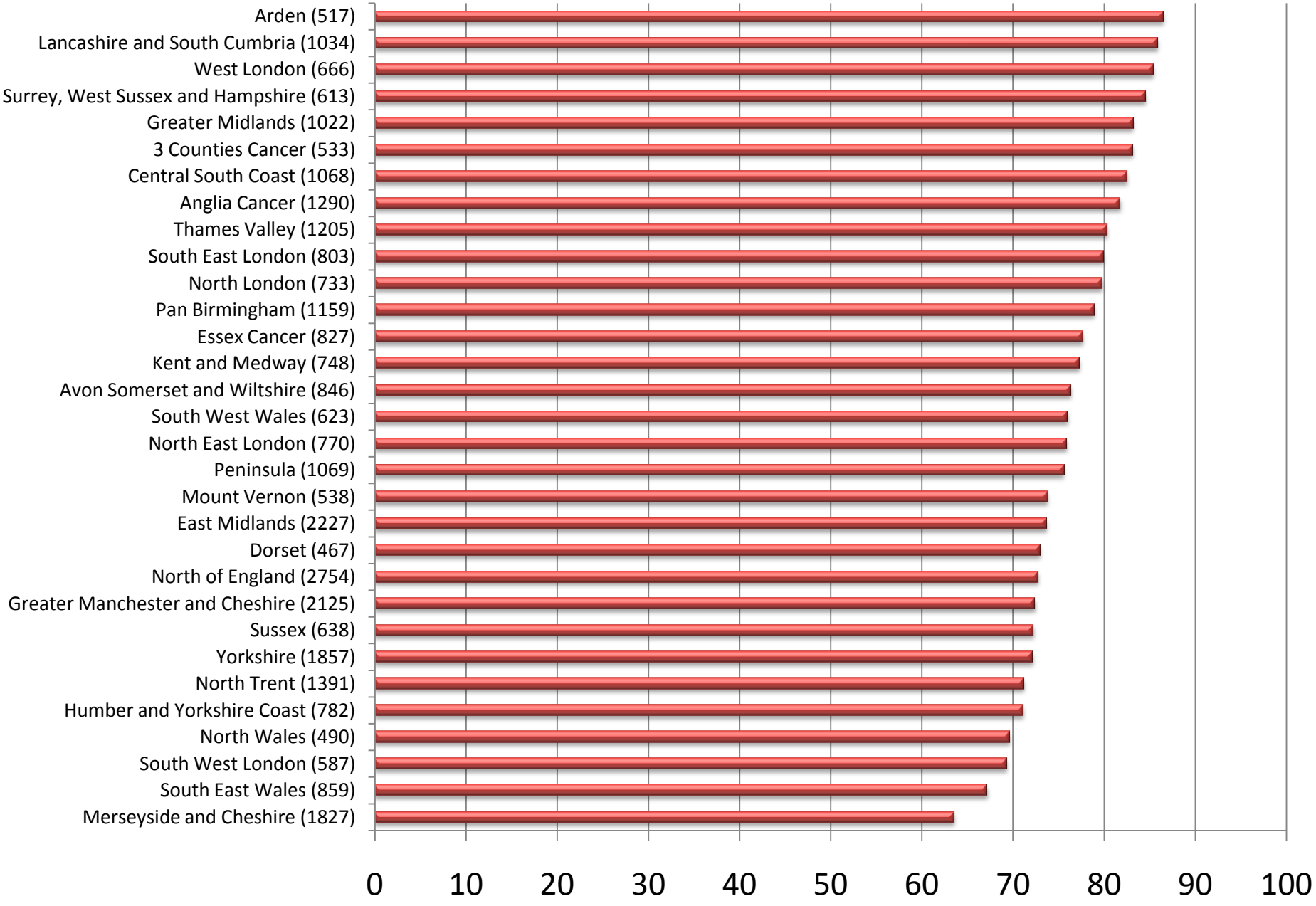
# VARIATION


% of expected
North of England (2754)
Arden (517)
Essex Cancer (827)
3 Counties Cancer (533)
Merseyside and Cheshire (1827)
Greater Midlands (1022)
Thames Valley (1205)
Peninsula (1069)
Dorset (467)
East Midlands (2227)
Surrey, West Sussex and Hampshire (613)
North Wales (490)
South East Wales (859)
North Trent (1391)
Pan Birmingham (1159)
Lancashire and South Cumbria (1034)
Humber and Yorkshire Coast (782)
Sussex (638)
Yorkshire (1857)
Mount Vernon (538)
Avon Somerset and Wiltshire (846)
North London (733)
Greater Manchester and Cheshire (2125)
North East London (770)
Central South Coast (1068)
Anglia Cancer (1290)
South West Wales (623)
South East London (803)
Kent and Medway (748)
West London (666)
South West London (587)
0%
20%
40%
60%
80%
100%
120%

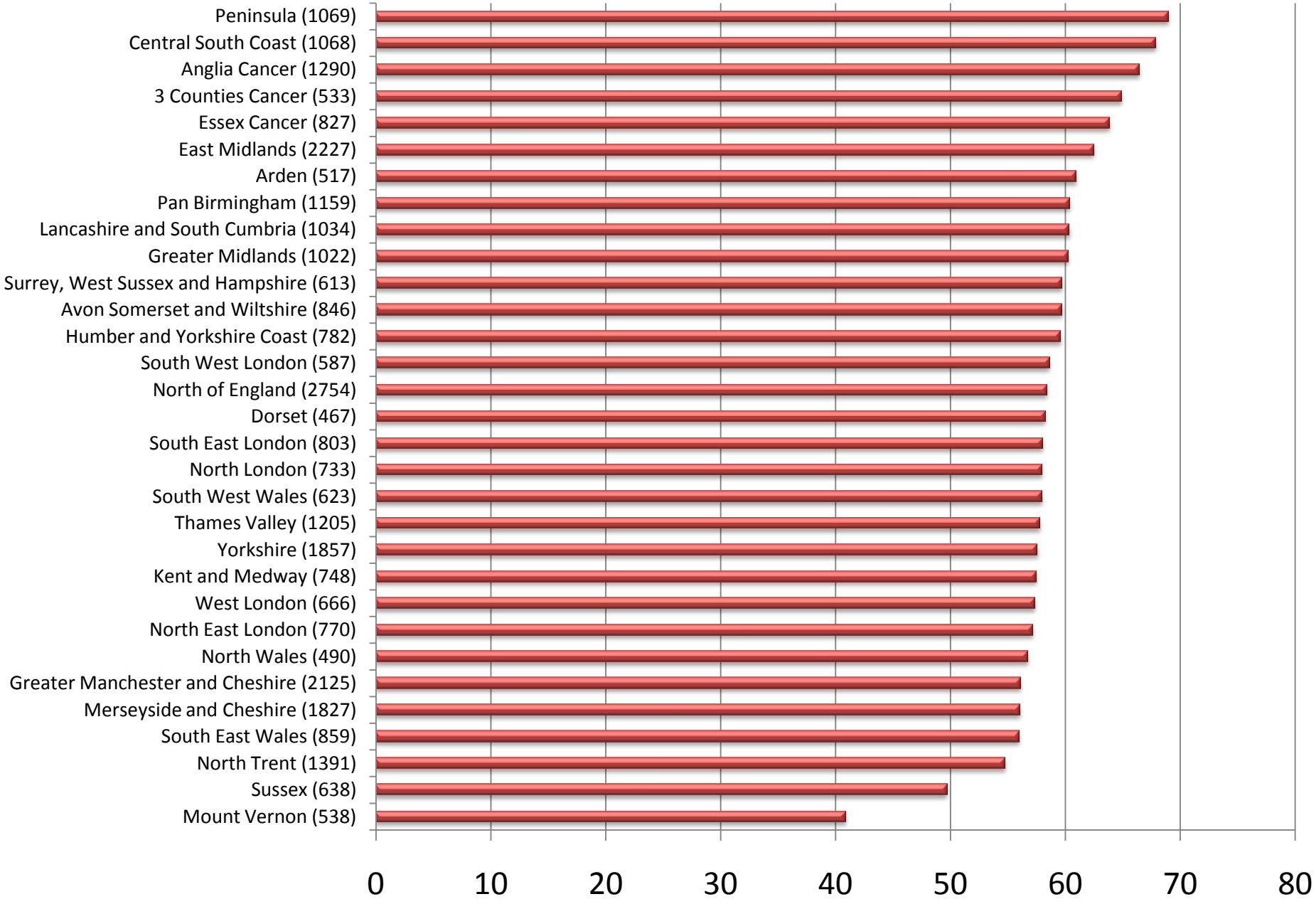
# PS and Stage Recorded



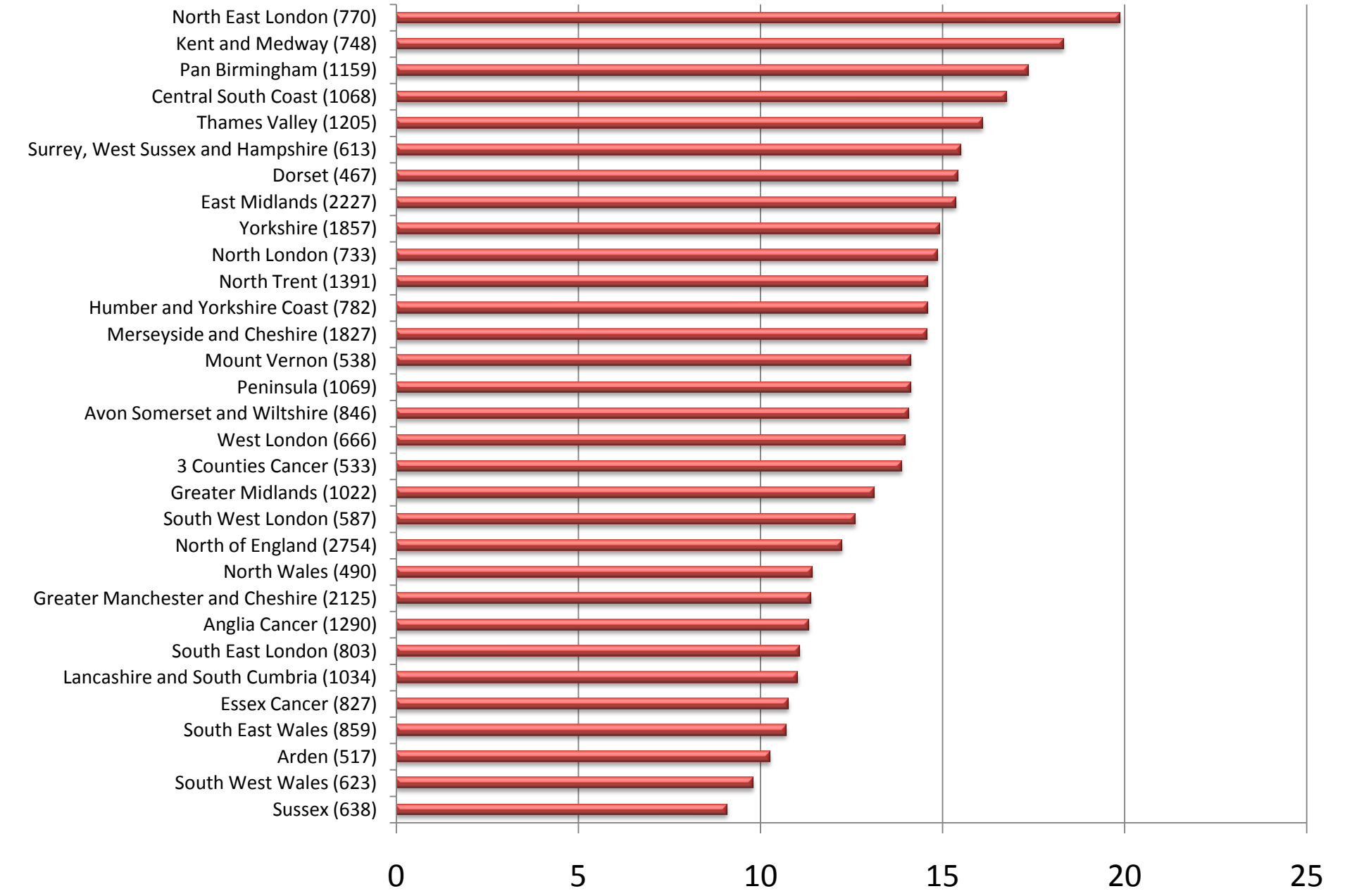
# Histological Confirmation Rate



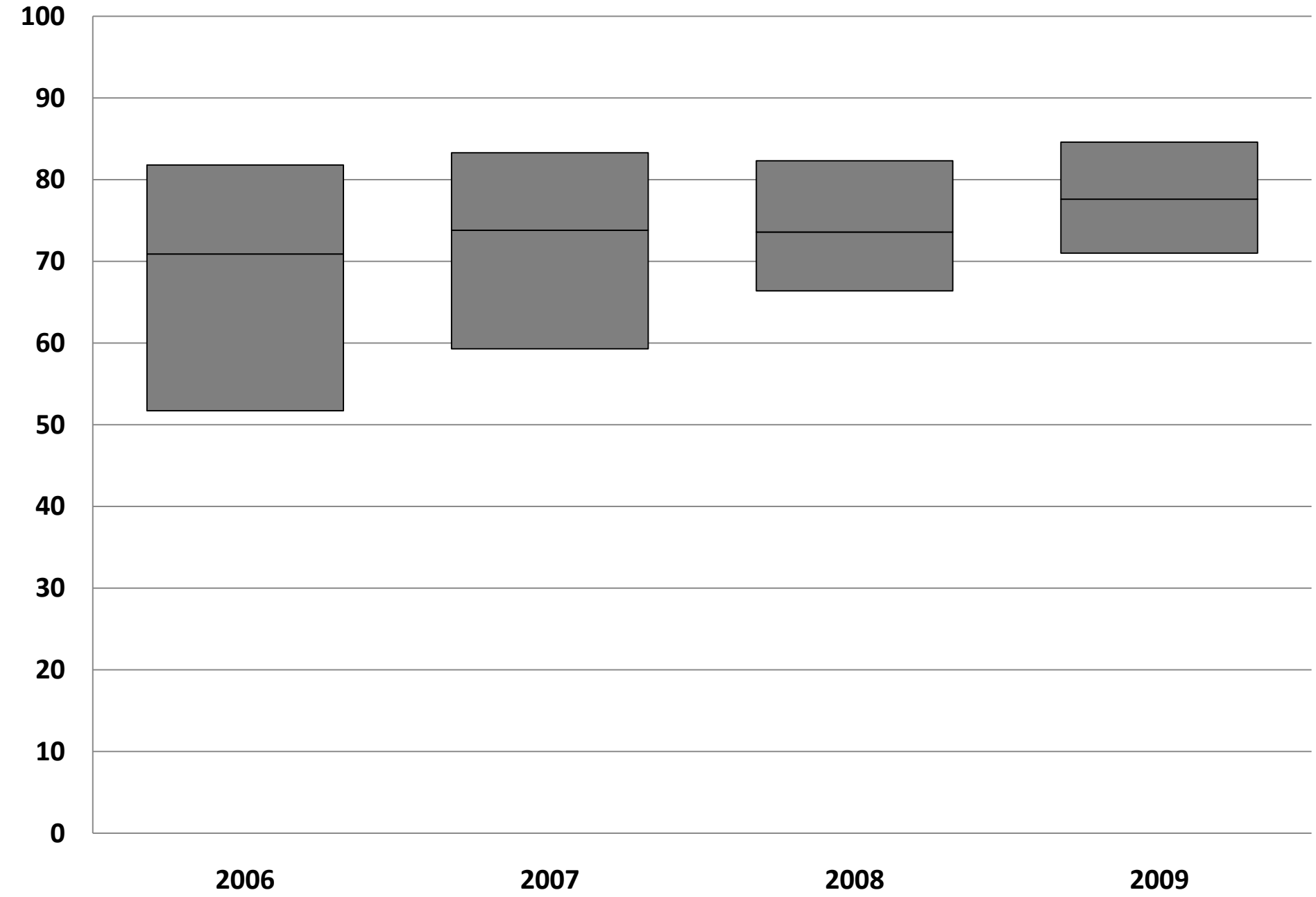
# Active Treatment

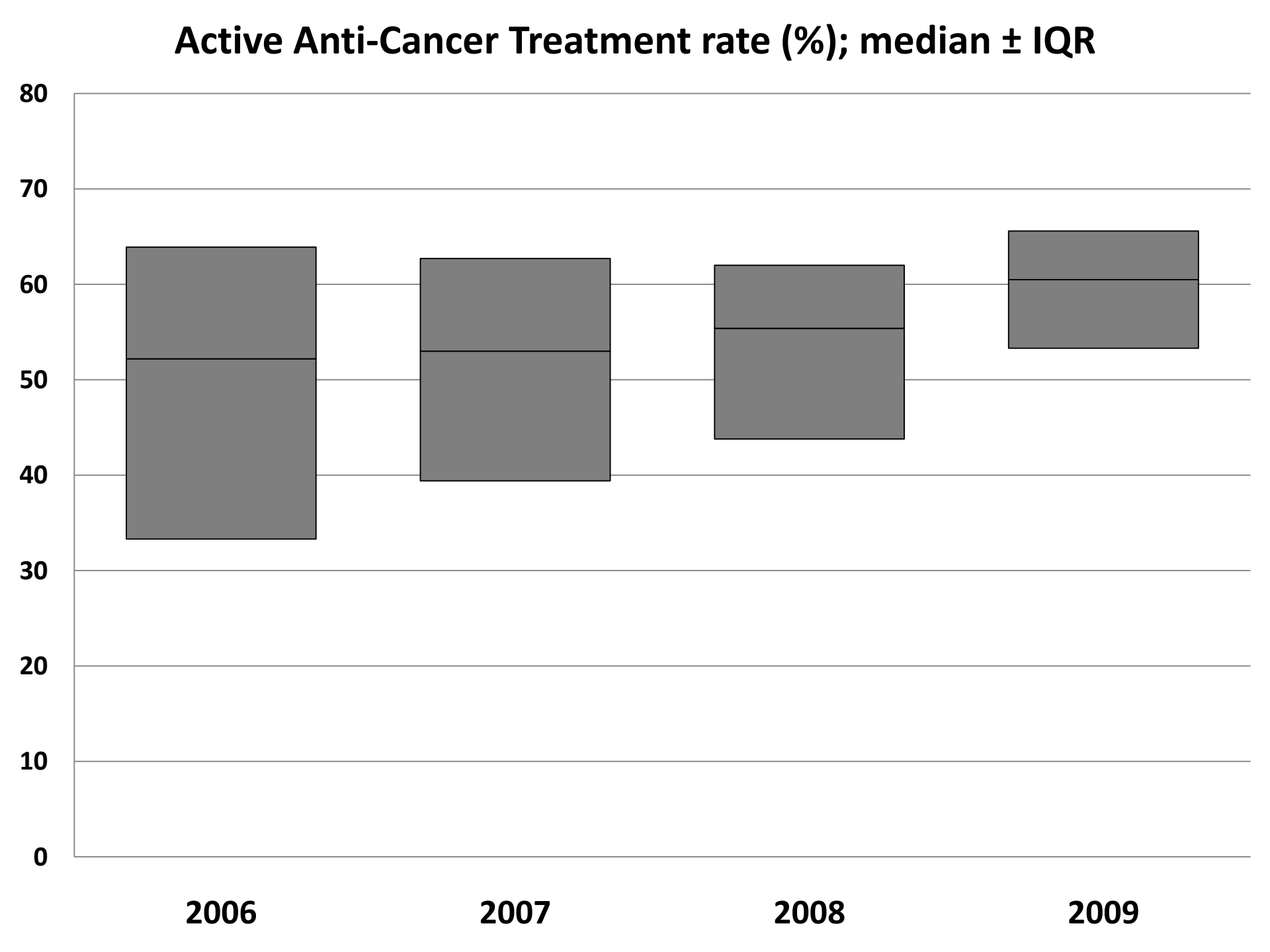


# Surgery (Overall)

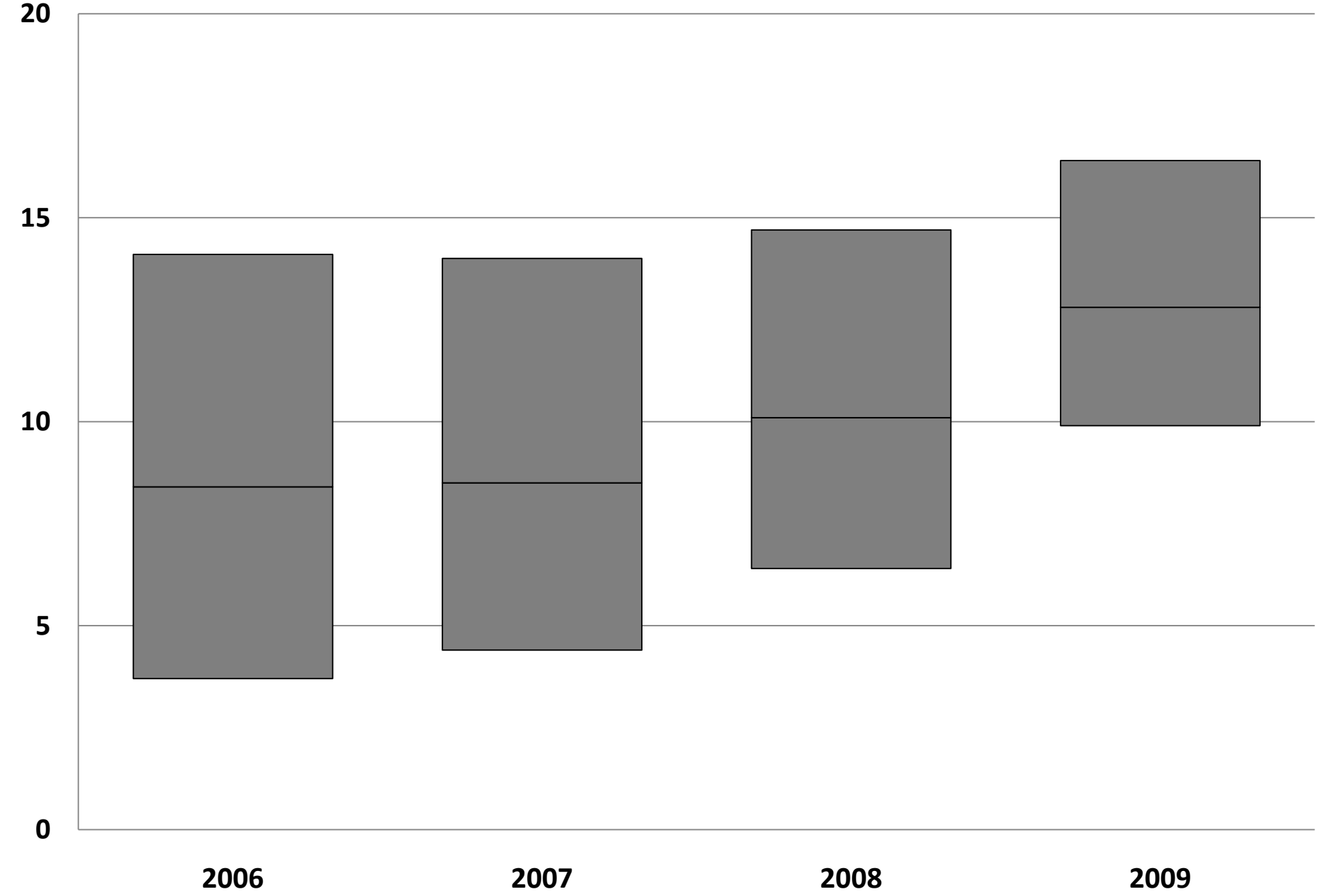


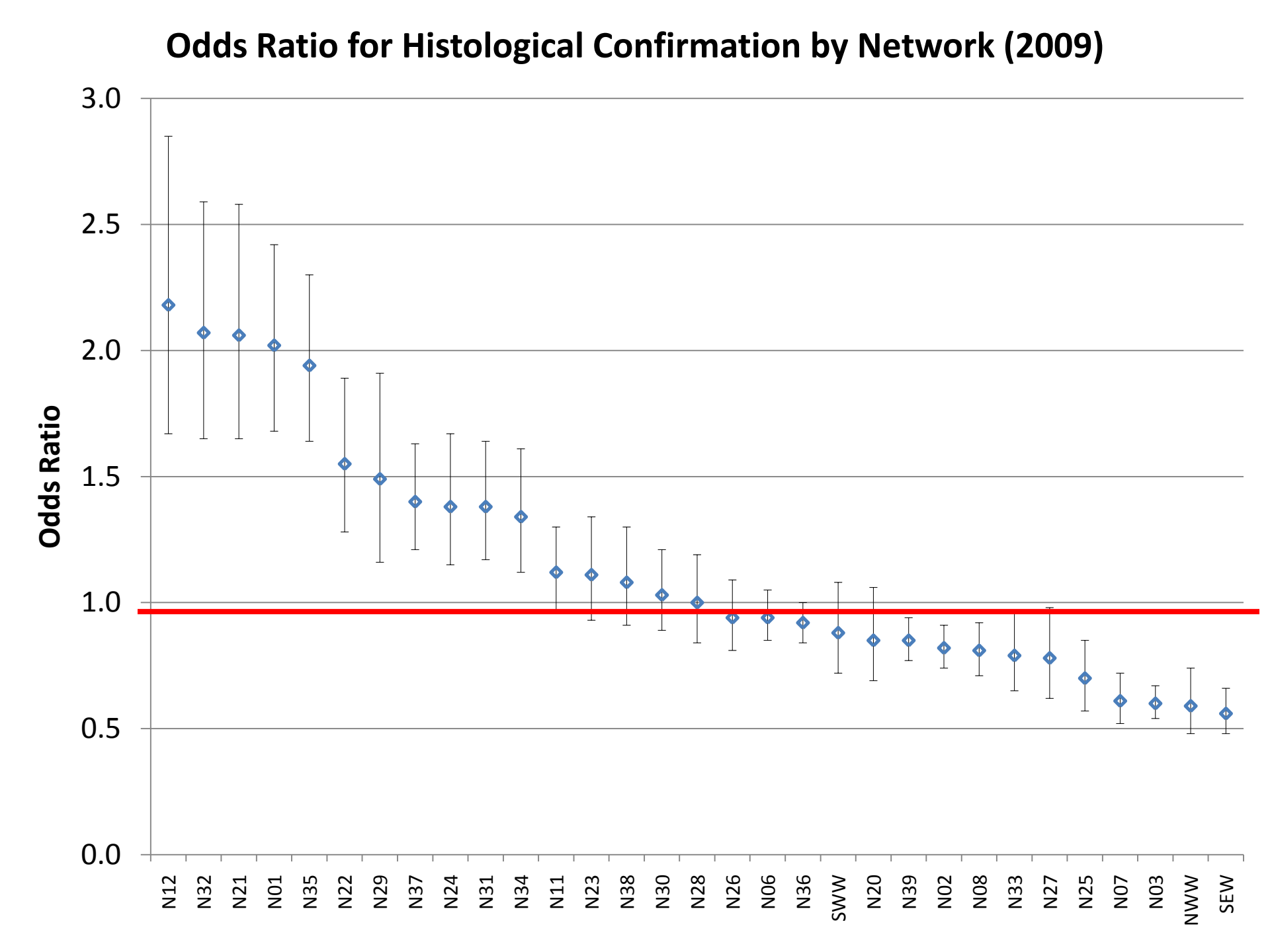
# Histological Confirmation rate (%); median ± IQR

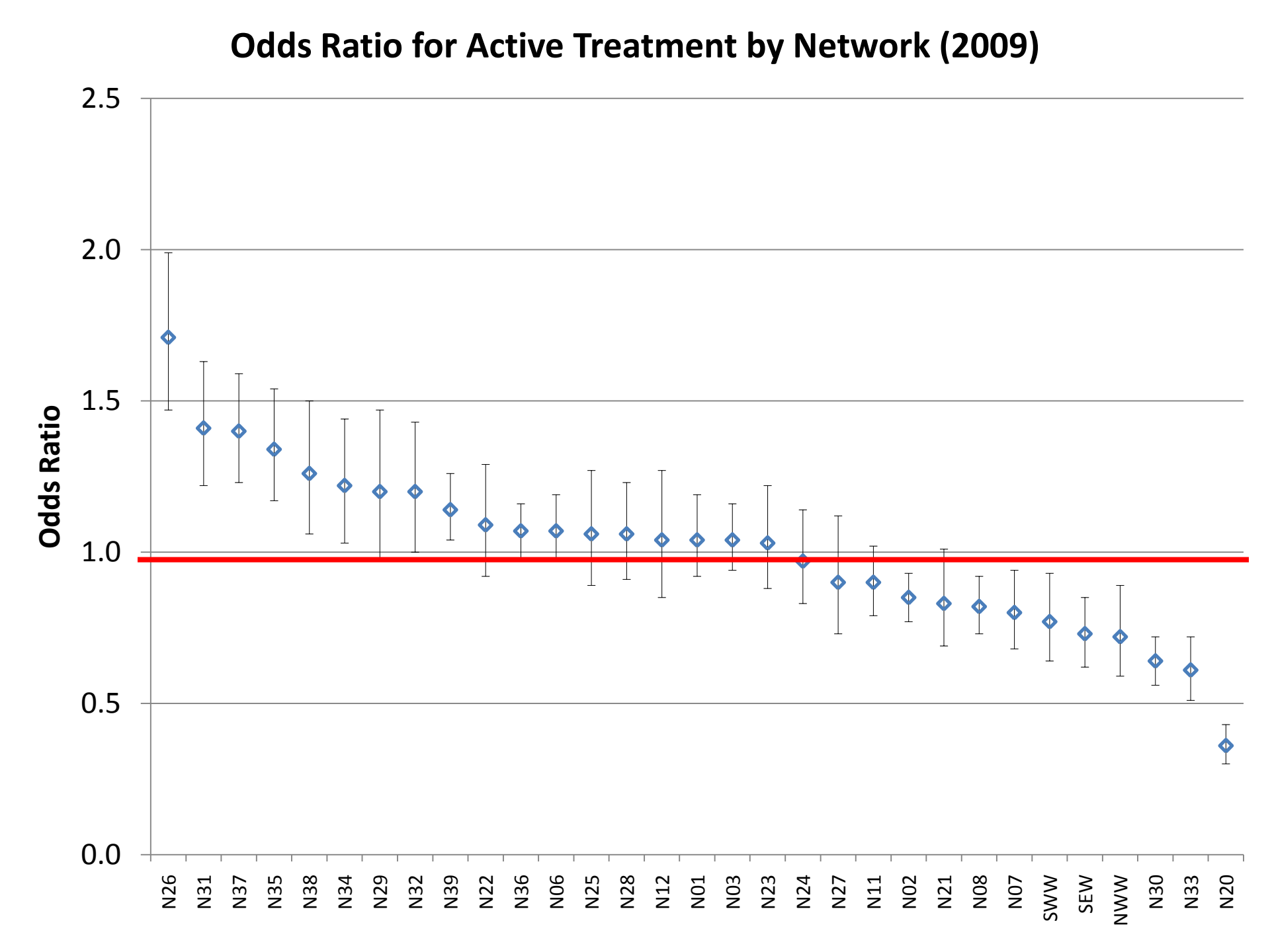


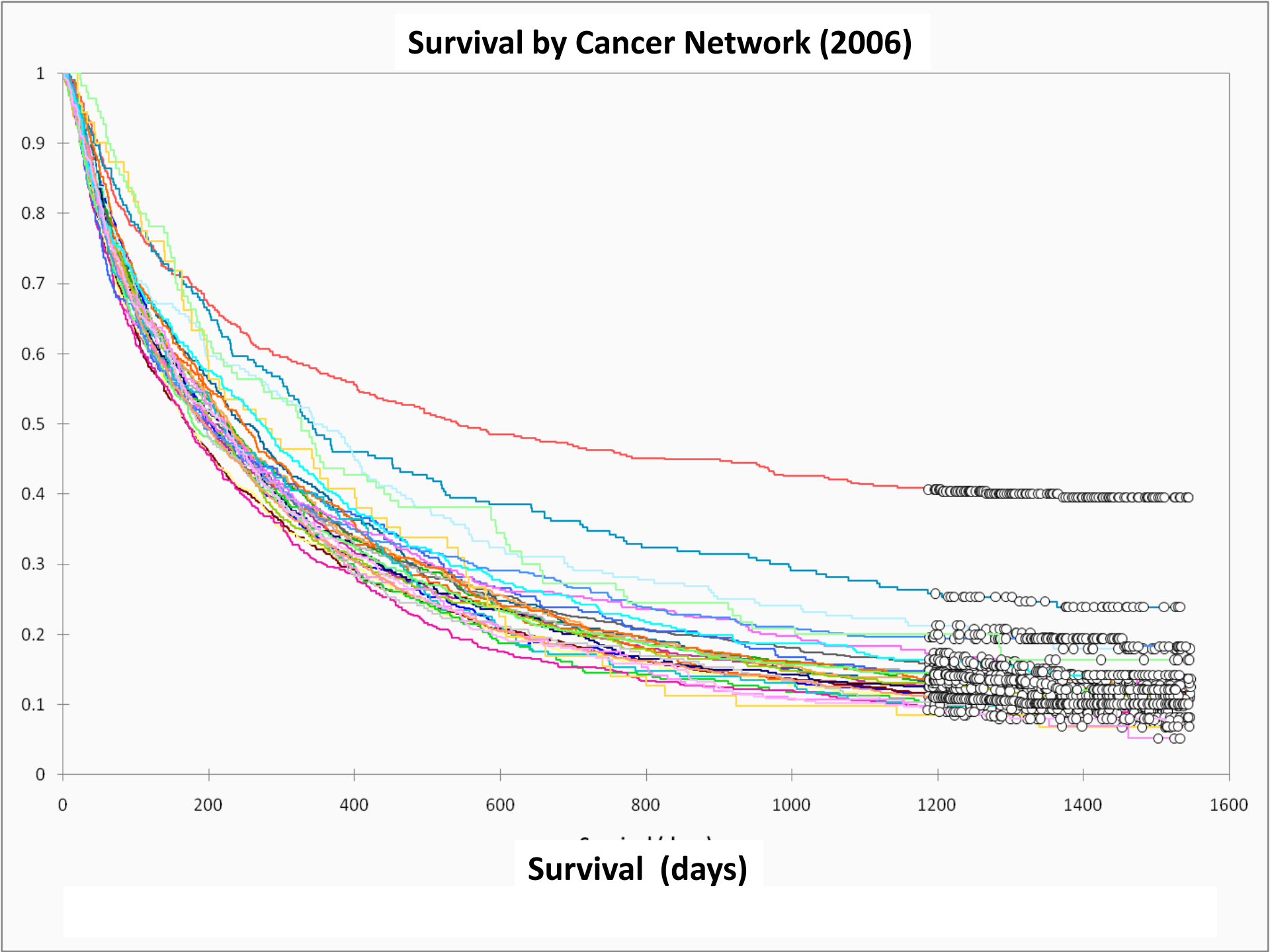

Active Anti-Cancer Treatment rate (%); median ± IQR
80
70
60
50
40
30
20
10
0
2006
2007
2008
2009

# Surgical Resection Rate – all cases (%)median ± IQR




Odds Ratio for Histological Confirmation by Network (2009)
Odds Ratio
3.0
2.5
2.0
1.5
1.0
0.5
0.0
N12
N32
N21
N01
N35
N22
N29
N37
N24
N31
N34
N11
N23
N38
N30
N28
N26
N06
N36
SWW
N20
N39
N02
N08
N33
N27
N25
N07
N03
NWW
SEW


Odds Ratio for Active Treatment by Network (2009)
Odds Ratio
2.5
2.0
1.5
1.0
0.5
0.0
N26
N31
N37
N35
N38
N34
N29
N32
N39
N22
N36
N06
N25
N28
N12
N01
N03
N23
N24
N27
N11
N02
N21
N08
N07
SWW
SEW
NWW
N30
N33
N20


Survival by Cancer Network (2006)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
200
400
600
800
1000
1200
1400
1600
Survival (days)

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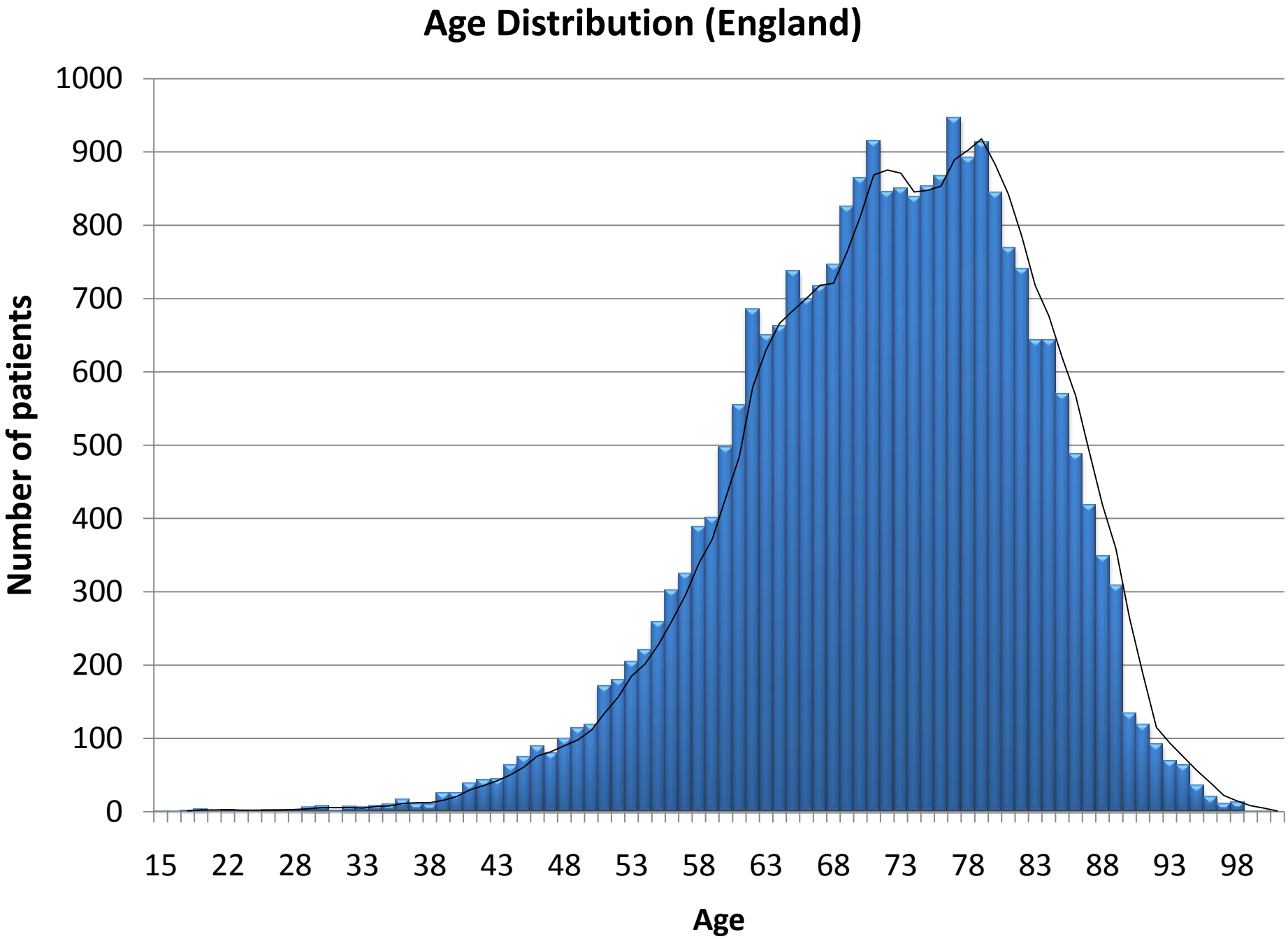
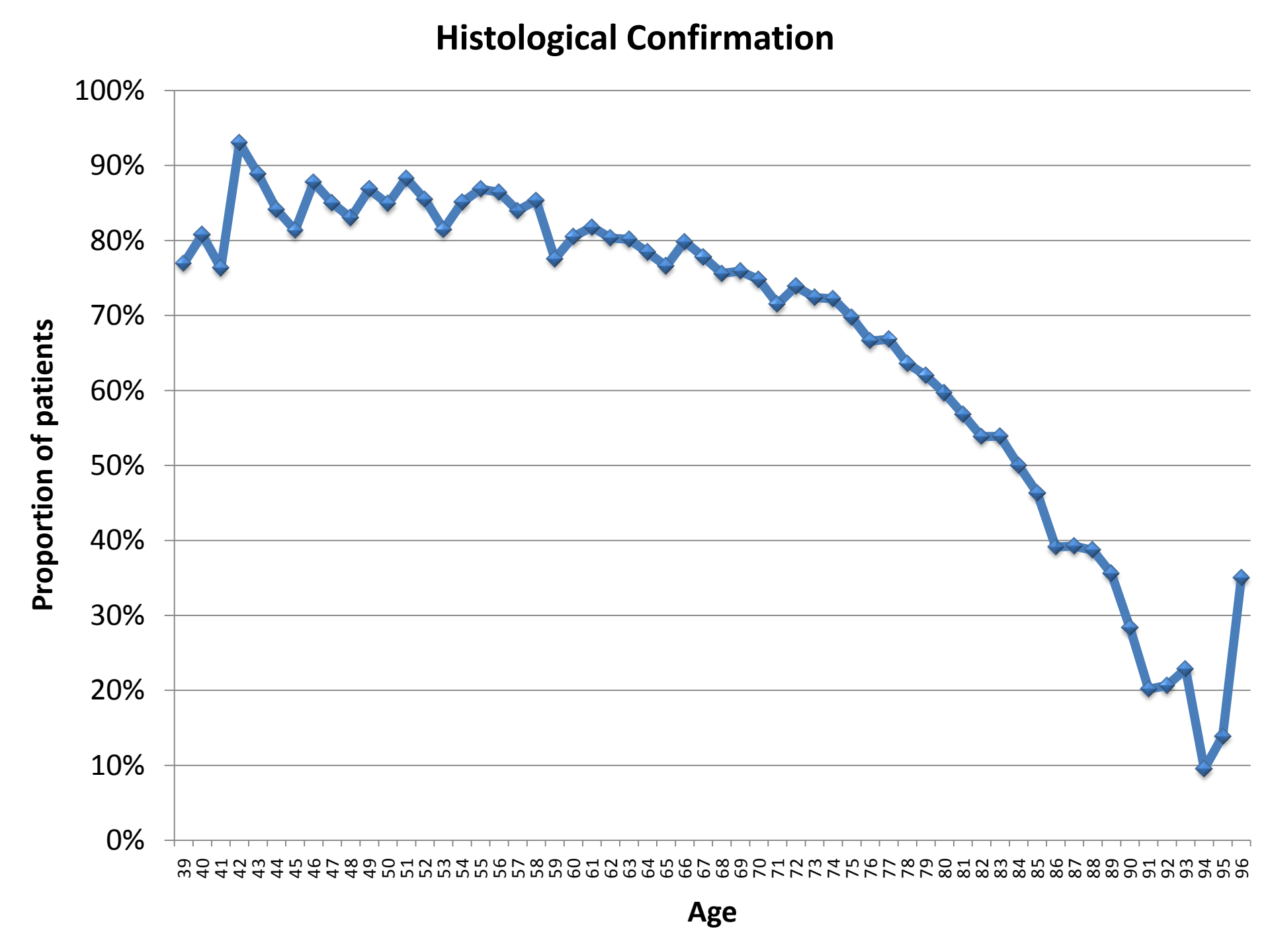
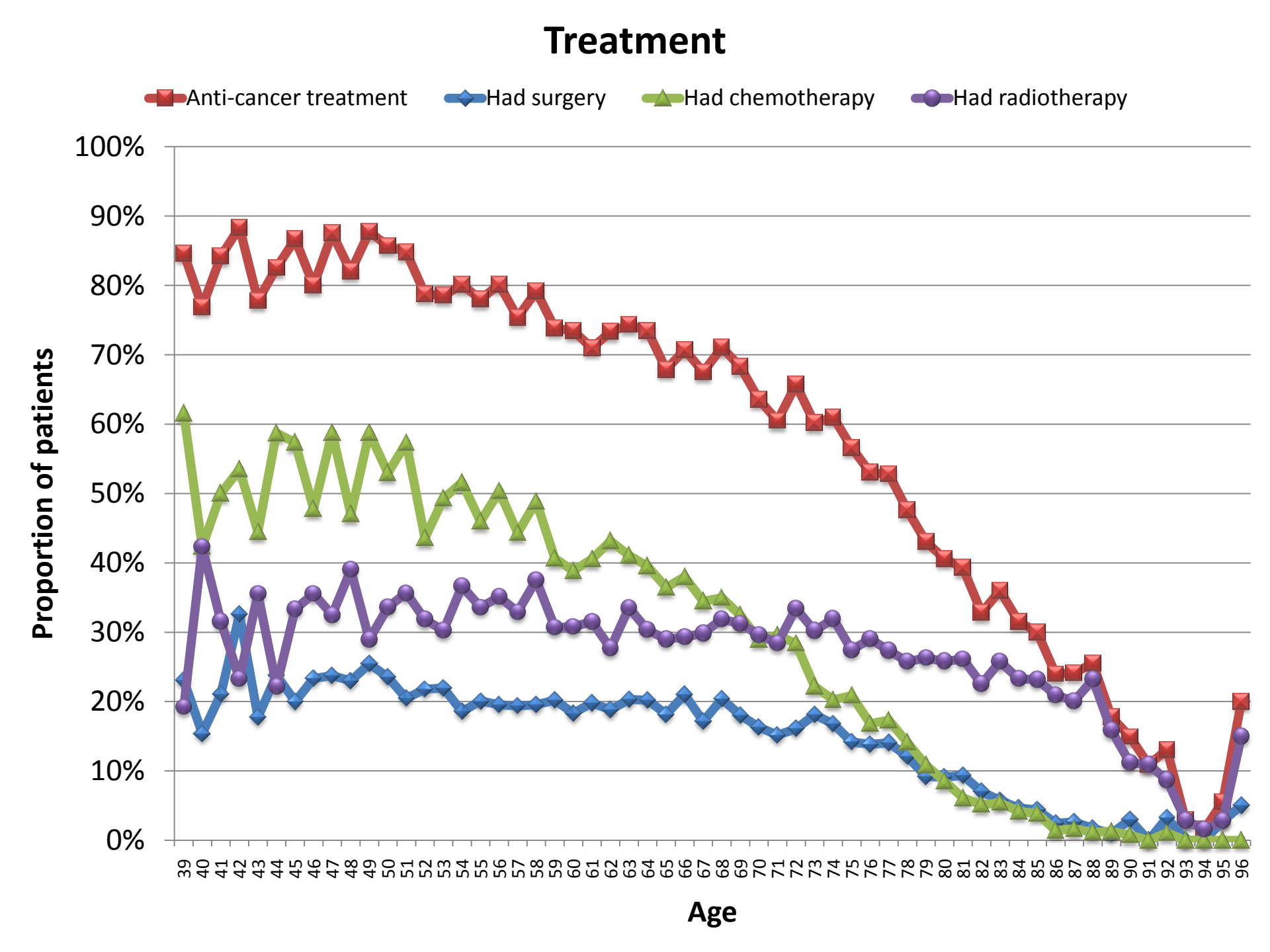
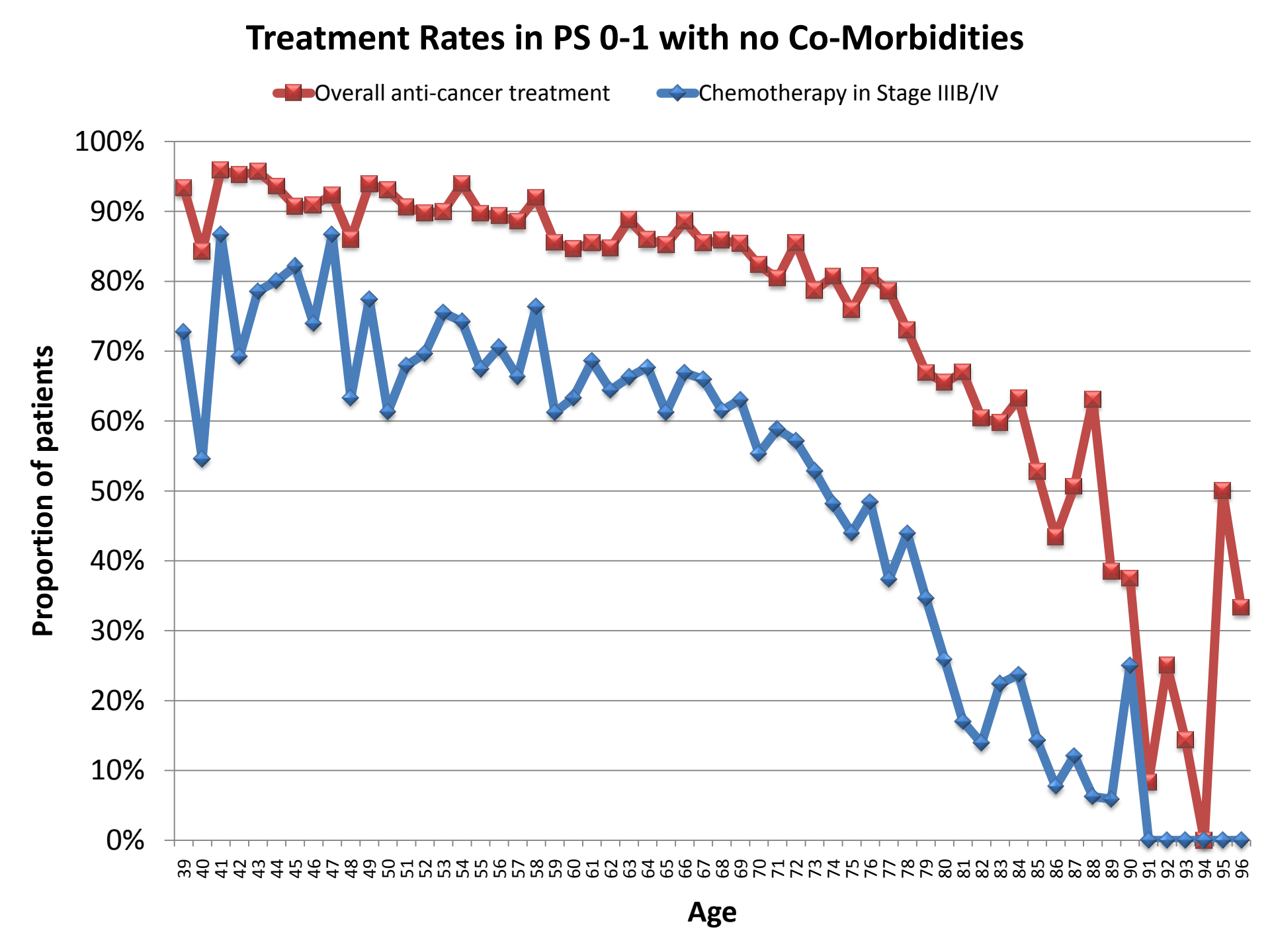
# AGE


Age Distribution (England)
Number of patients
1000
900
800
700
600
500
400
300
200
100
0
15
22
28
33
38
43
48
53
58
63
68
73
78
83
88
93
98
Age


Histological Confirmation
Proportion of patients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96
Age


Treatment
Anti-cancer treatment
Had surgery
Had chemotherapy
Had radiotherapy
Proportion of patients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96
Age


Treatment Rates in PS 0-1 with no Co-Morbidities
Overall anti-cancer treatment
Chemotherapy in Stage IIIB/IV
Proportion of patients
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96
Age

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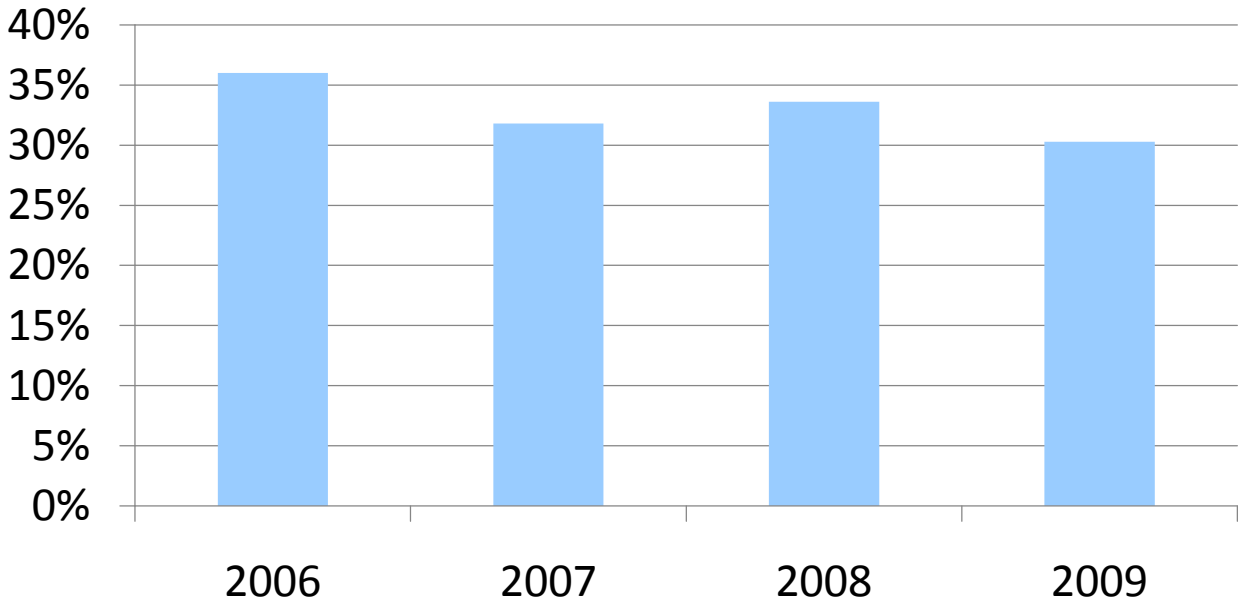
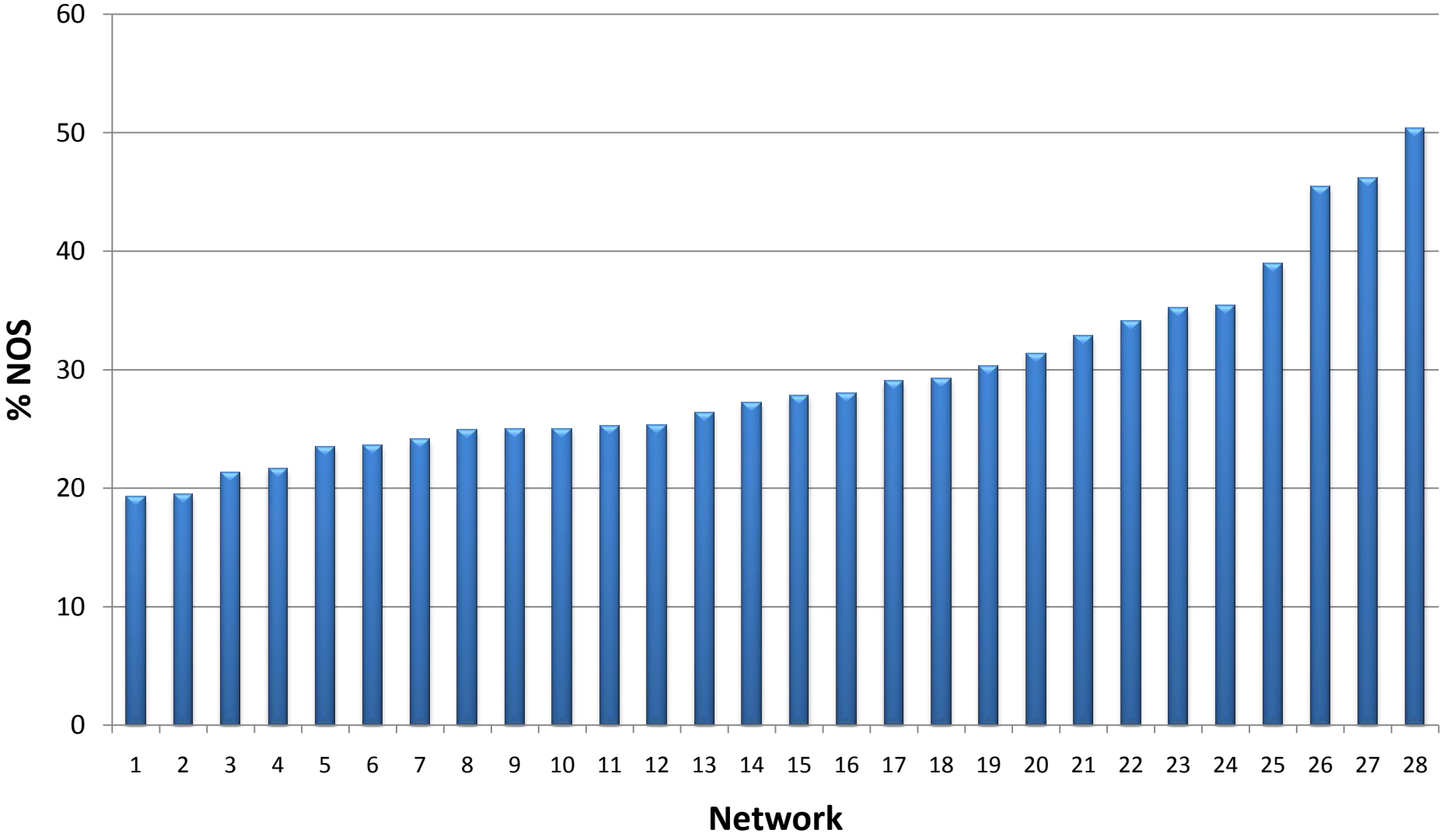
# PATHOLOGY

# NSCLC 'NOS' rate



# NSCLC ‘NOS’ Rate by Network (2009)



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# HOW IS THE DATA BEING USED?

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# How Is The Data Being Used?

- Datapacks
- NHS Choices
- ILCOP
- NICE Guidelines
- National Cancer Intelligence Network
- International Cancer Benchmarking Project
- ERS “European Quality Initiative for the Management of Lung Cancer
- LUCADA Fellow
- Other research
- Peer Review

# The Future

- Maintain enthusiasm
- Update dataset
- Revise reporting measures
- Strengthen links between measures and outcome (survival)

# Acknowledgments


- **All MDT staff/clinicians/CNSs *across the UK***
- NLCA Project team:

  Dr Roz Stanley – project manager (Information Centre)

  Drs Mick Peake & Ian Woolhouse – co-clinical leads (RCP)

  Anthony Yelland – analyst (Information Centre)
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- Anna Rich – City Hospital Nottingham
- Analysts from Wales, Scotland (SCAN networks), Northern Ireland
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