YHPHO

NHS

Northern and Yorkshire
Cancer Registry and Information Service

Health Equity Profile

Theme: Access to secondary care services for lung cancer

Area: West Yorkshire

Date: July 2005

Version 1

HEALTH EQUITY PROFILE– Access to secondary care services for lung cancer in West Yorkshire

Introduction

This report is one of a series of equity profiles focussing on West Yorkshire, and aims to explore issues around equity of provision of secondary care lung cancer services in the West Yorkshire area. The report aims to measure how recent service provision has reflected patterns of need in relation to 4 key dimensions; age, gender, socio-economic status and geography. The report is intended primarily to inform cancer equity audit work being undertaken at the West Yorkshire level. However it is hoped that the framework used and also the findings, can be used as part of Health Equity Audit (HEA) being undertaken across Primary Care Trusts (PCTs) and Local Strategic Partnerships (LSPs) in the West Yorkshire area.

Table 1 summarises the scope of this Health Equity Profile. Again it is worth noting that the profile is not intended to be comprehensive. Indicators used have been selected according to availability across the area covered, and represent only a part of the range of measures that could form part of a cancer equity profile.

Format

The profile considers each dimension of equity in turn, looking first at measures of need, then each measure of provision used. Equity issues are explored for each dimension. An overall summary is also provided at the end of the profile.

YHPHO are aiming to provide 'datapacks' to support health equity profiling at different geographical levels.

YHPHO are also developing a series of templates for HEP, focussing on a range of other key policy areas such as diabetes and accidents. For more information on our work programme around HEA please visit our website at www.yhpho.org.uk

Table 1: Equity Profile Framework

THEME:

- Lung Cancer – access to secondary care services

GEOGRAPHICAL AREA:

- West Yorkshire Strategic Health Authority

TIME PERIOD:

- Need data (incidence & mortality) – 1998-2002
- Secondary care provision data – 2002

DIMENSIONS OF EQUITY COVERED:

- **Age and gender (pages 4-8)**
- **Geography (PCT) (pages 9-12)**
- **Socio-economic status (pages 13-16)**

MEASURES USED:

Measures of Need	Measures of service provision
• Incidence rates • Mortality rates	• Waiting time – referral to diagnosis • Waiting times – diagnosis to treatment • Treatment types

Please see Appendix for more detailed information on data sources and methods used.

Background and Context

Health Equity Audit

Health Equity Audit (HEA) has been identified as a key tool for embedding evidence on health inequalities into mainstream NHS activity such as planning, commissioning and service delivery[1]. It is now a mandatory responsibility of Primary Care Trusts and is included as part of the National Planning Guidance for 2005-8[2] as well as the 2004 Healthcare Commission performance ratings for PCTs[3].

Health equity audit aims to identify how fairly services or other resources are distributed in relation to the health needs of different groups and areas, and the priority actions required to provide services relative to need. The overall aim of HEA is to distribute resources relative to need. It is a cyclical process, as illustrated in points 1 to 6 in **Figure 1**.

A recent national survey of PCTs in England was designed to assess their experience with the requirement to undertake HEA[4]. The report identified equity profiling as one of the elements of HEA where most support is needed. The key types of support identified included provision of comparator data and expertise on methodologies and techniques.

In response to this Yorkshire and Humber Public Health Observatory are developing a programme of HEA work aimed particularly at supporting the equity profiling elements of the audit process. The programme has three main parts:

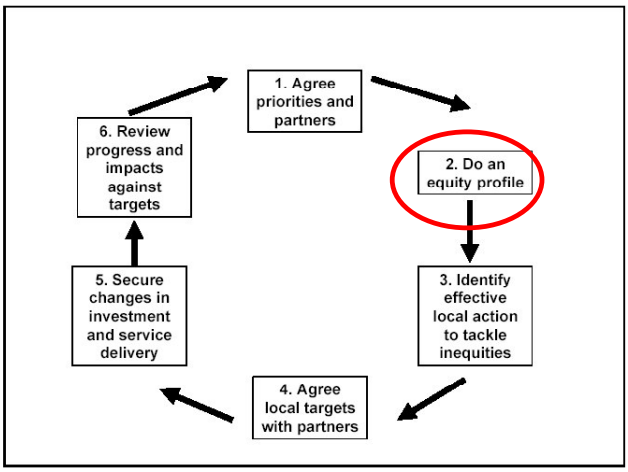
- Development of a framework for equity profiling
- Regional/SHA level equity profiling
- Provision of comparator data to support PCT work on HEA

For further information regarding our work programme on HEA visit: www.yhpho.org.uk.

Equity profiling compares how the relationship between need and service provision/use varies across the different *dimensions* of equity*. It involves the process of collating and analysing data and evidence on need and health inequalities, and the confirming that inequity exists.

* *Dimensions* of equity – e.g. age, gender, disability, ethnicity, socio-economic status, geography.

Figure 1: The Health Equity Audit Cycle

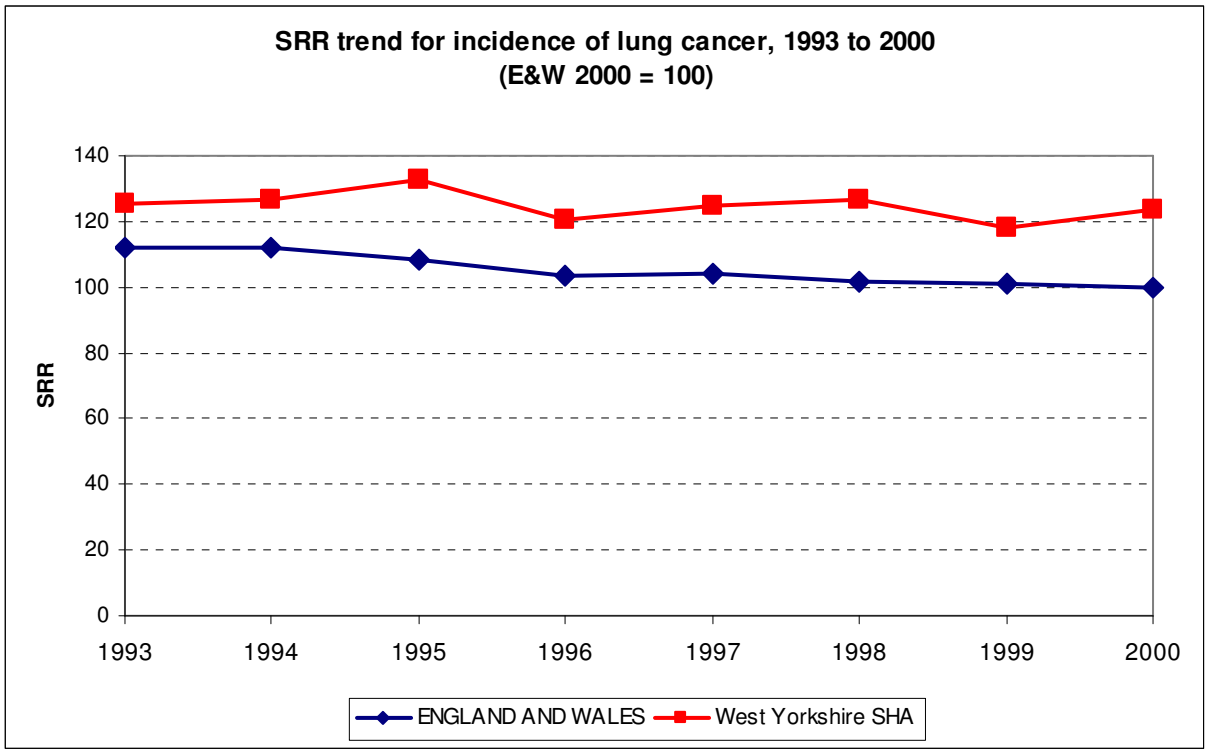


Lung Cancer in West Yorkshire

There are approximately 1500 cases of lung cancer each year within West Yorkshire. Approximately 1300 people per year die from lung cancer.

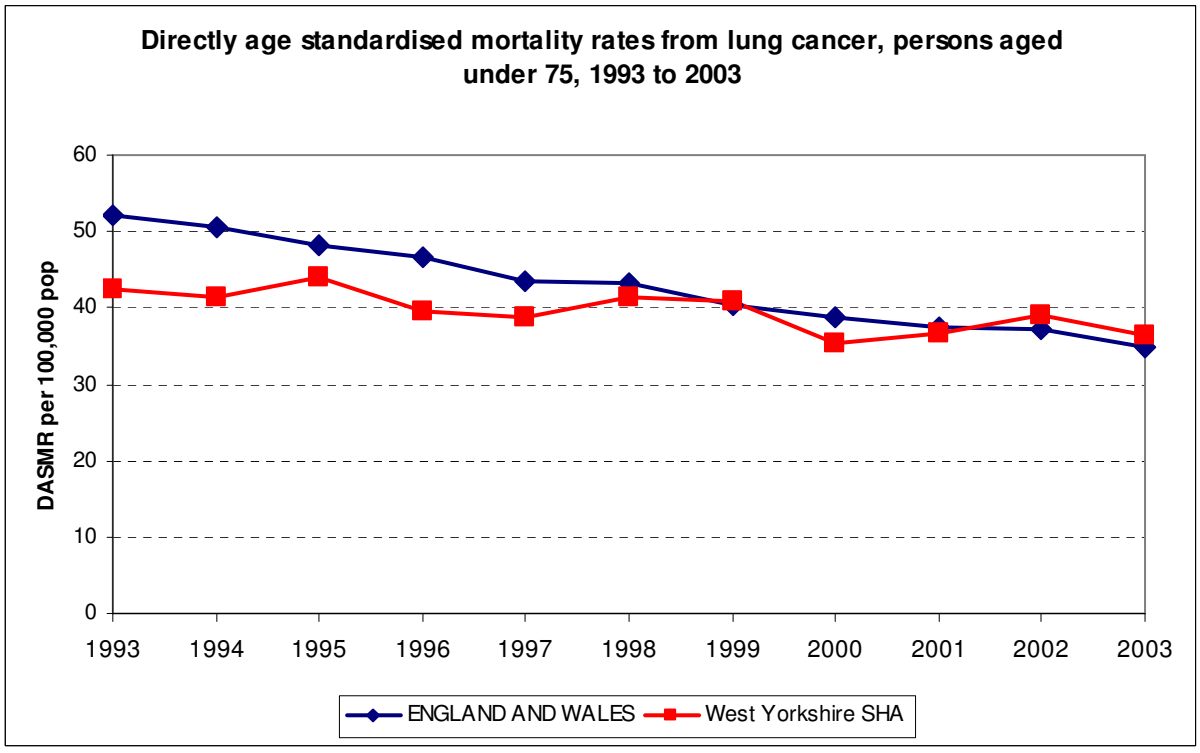
Figure 2 and **Figure 3**: Incidence rates in West Yorkshire have been higher than national averages in recent years. Mortality rates in West Yorkshire have dropped slightly over the time period and are equivalent to national rates. (In 2003 mortality rates for lung cancer in West Yorkshire were 4% higher than the rate for England and Wales as a whole.) Incidence rates in 2000 were 24% higher than national levels: national rates are decreasing while rates in West Yorkshire have remained steady since1996 (note that England & Wales incidence rates are not yet available for 2001 and 2002 from *The Compendium of Clinical and Health Indicators*).

Figure 2: Trends in incidence from lung cancer, 1993-2000



Source: Compendium of Clinical and Health Indicators 2003

Figure 3: Trends in mortality from lung cancer, 1993-2003



Source: Compendium of Clinical and Health Indicators 2004

1. Age and gender

1.1 Need: Incidence and mortality

Figure 4 to 6 shows incidence and mortality rates for lung cancer in males, females and persons by age group for 1998-2002 (five year average). Both incidence and mortality from lung cancer increase with age, with rates increasing dramatically from age 50-74; for persons aged 75 and over rates are more than double those for persons aged 50-74.

The incidence and mortality rates show a bias towards men: rates in the age group 75 and over in men are more than double the rate in women.

1.2 Provision

1.2.1 Waiting Times – GP referral to diagnosis

Figures 7 and 8 show how waiting times for patients referred by their GP varied by age group and gender in 2002. Persons aged 50-74 were most likely to be diagnosed within 2 weeks (40%) and those aged 75 and over least likely to be diagnosed within 2 weeks (32%). There was little variation by gender, with 37% of males and females diagnosed within 2 weeks.

1.2.2 Waiting Times - diagnosis to treatment

Diagnosis to treatment waits for patients of all ages tended to be longer than for referral to diagnosis (see **Figures 9 and 10**), with patients commonly waiting up to 8 weeks from diagnosis to first treatment. The group aged less than 50 were most likely to be treated within 4 weeks (60%), compared to the other age groups at around 35%. The proportion of patients waiting less than 4 weeks for treatment was very similar for both genders (36%).

Note
The national two week wait target from GP referral to date first seen relates only to those cases urgently referred by their GP. From the end of 2005 the 31-day target from decision to treat to first treatment relates to all lung cancers and the 62-day target from GP referral to first treatment relates to urgent referrals only. The data used here do not represent measures of these targets (due to differences in data definitions) and also relate to the whole population, not just urgent referrals.

1.2.3 Treatment

Figures 11 and 12 show the percentage of patients receiving treatment in 2002, by age group and gender.

In 2002, 51% of persons diagnosed with lung cancer received treatment for the disease, with males and females equally likely to have received similar treatment. There is a direct relationship between age and treatment, with 82% of persons aged under 50 and 34% of persons aged over 75 receiving treatment. Most treatment types reduced with age: persons aged under 50 were most likely to receive chemotherapy, and the group aged 50-74 were more likely to receive radiotherapy.

1.3 Equity Issues

- Need as measured by incidence and mortality increased dramatically with age. Rates of both were higher in men than women.
- Waiting times for both diagnosis and treatment varied by age, with the older age groups waiting longer for treatment.
- Treatment rates and type varied by age group, though this is likely to relate to issues around appropriateness of treatment, and increasing co-morbidity.
- Service provision measured by waiting times and treatment types were similar for males and females.

Age and Gender

Figure 4: males

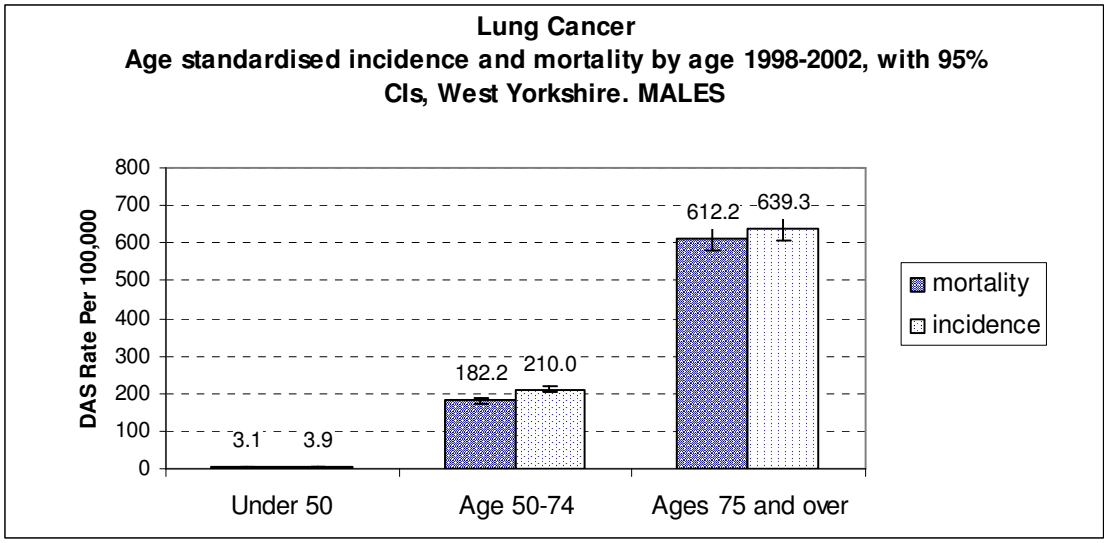


Figure 5: females

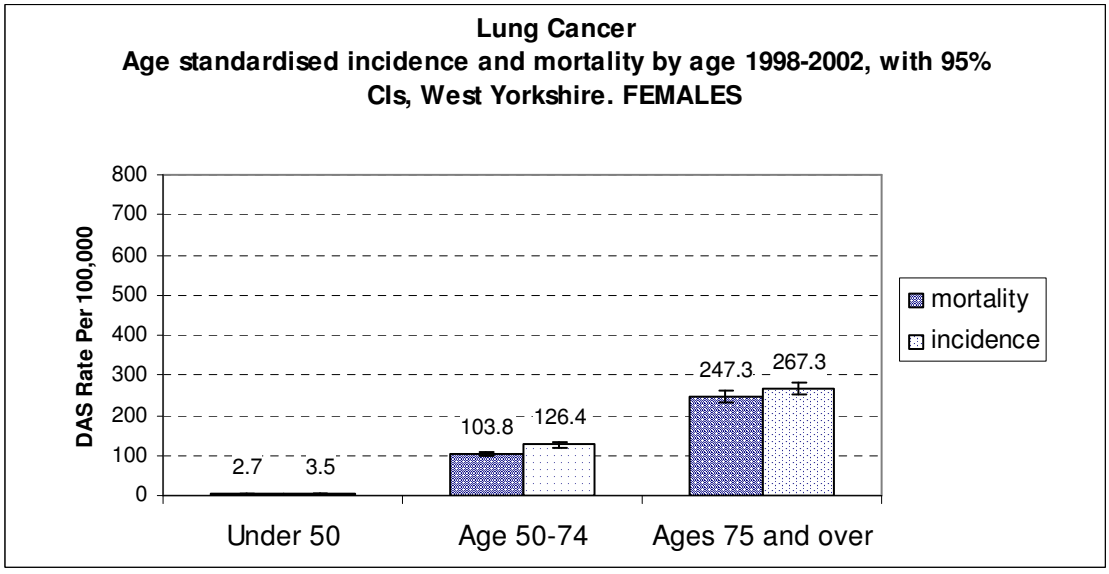
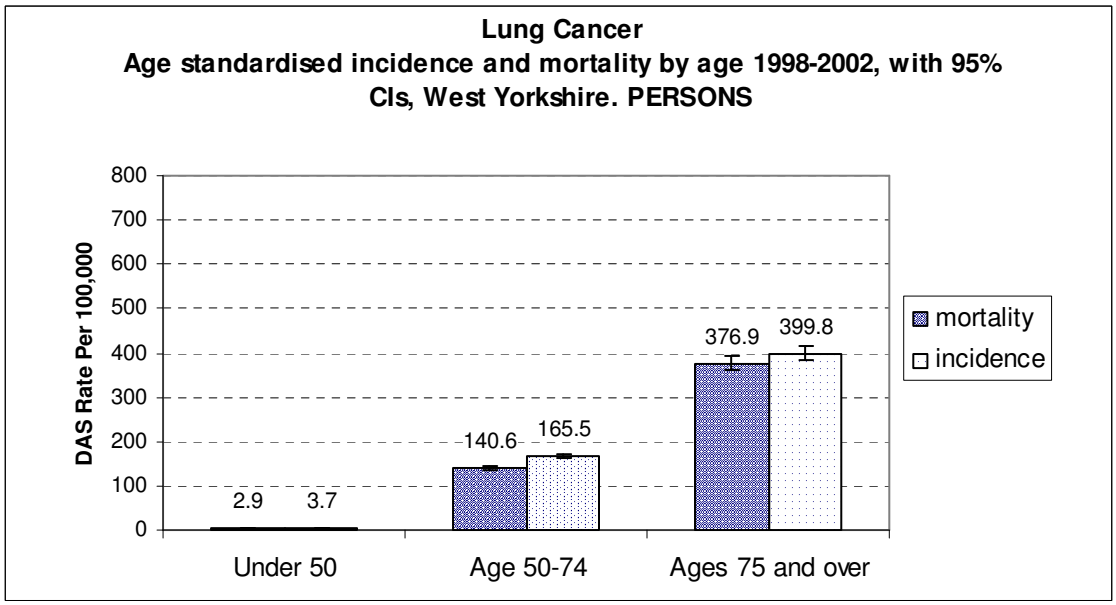


Figure 6: persons



Provision: Waiting Times – referral to diagnosis

Figure 7: Age

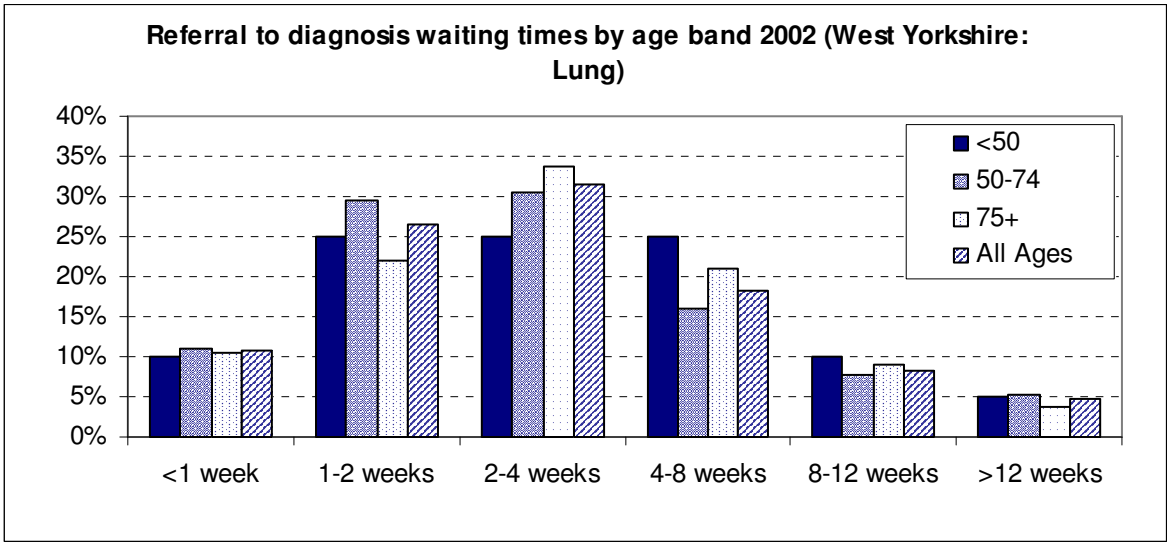
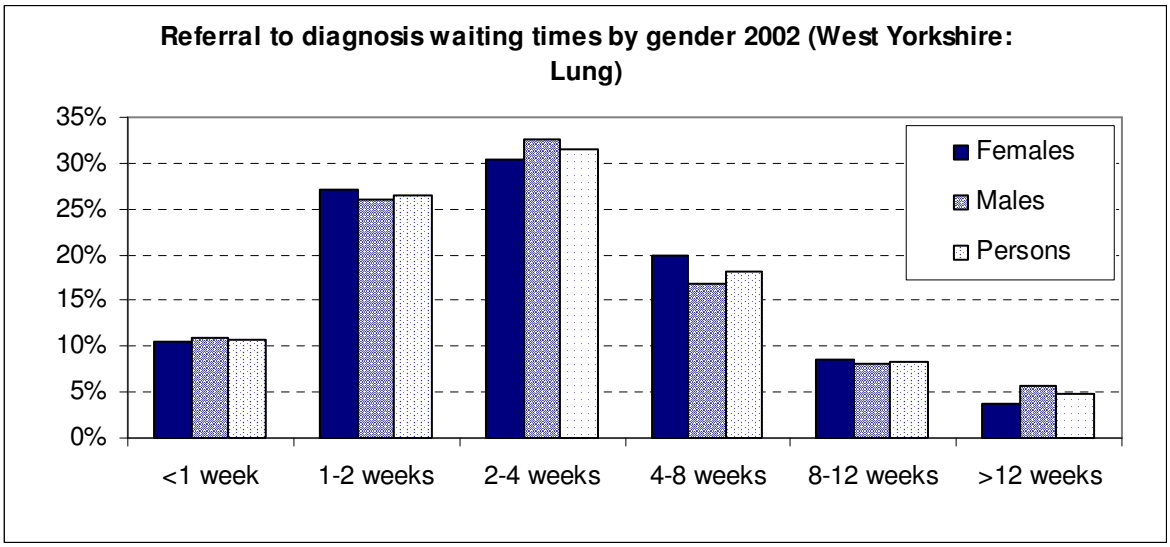


Figure 8: Gender



Age and Gender

Provision: Waiting Times –diagnosis to treatment

Figure 9: Age

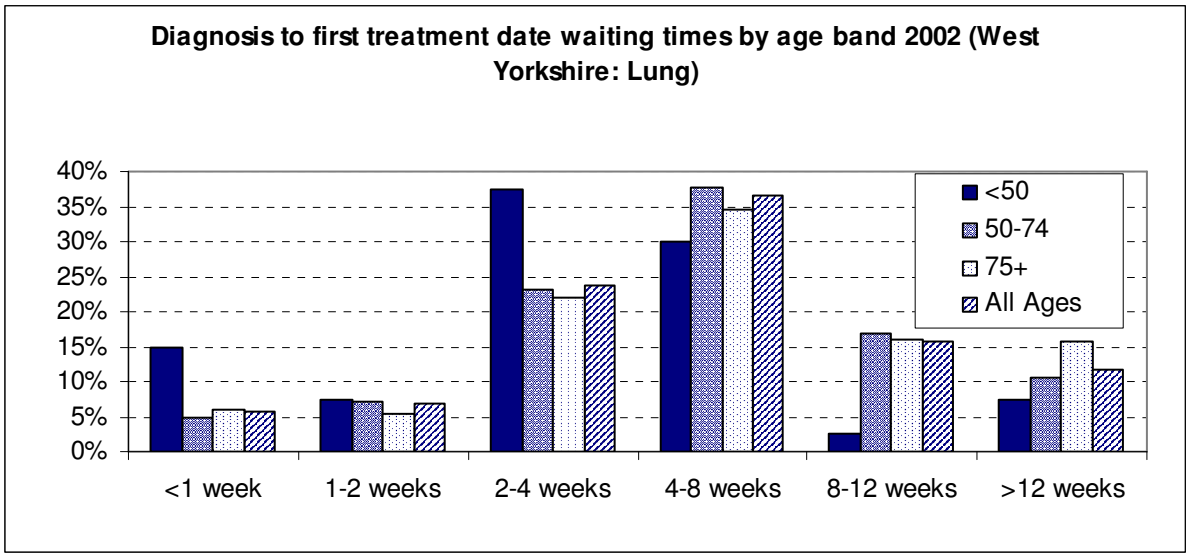
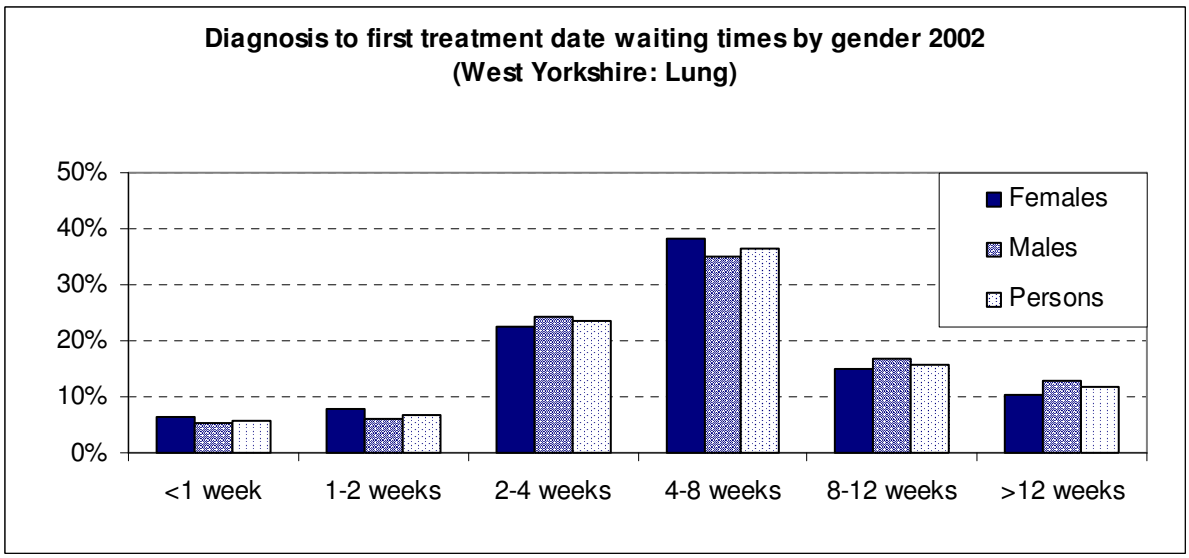


Figure 10: Gender



Age and Gender

Provision - Treatment Type

Figure 11: Age

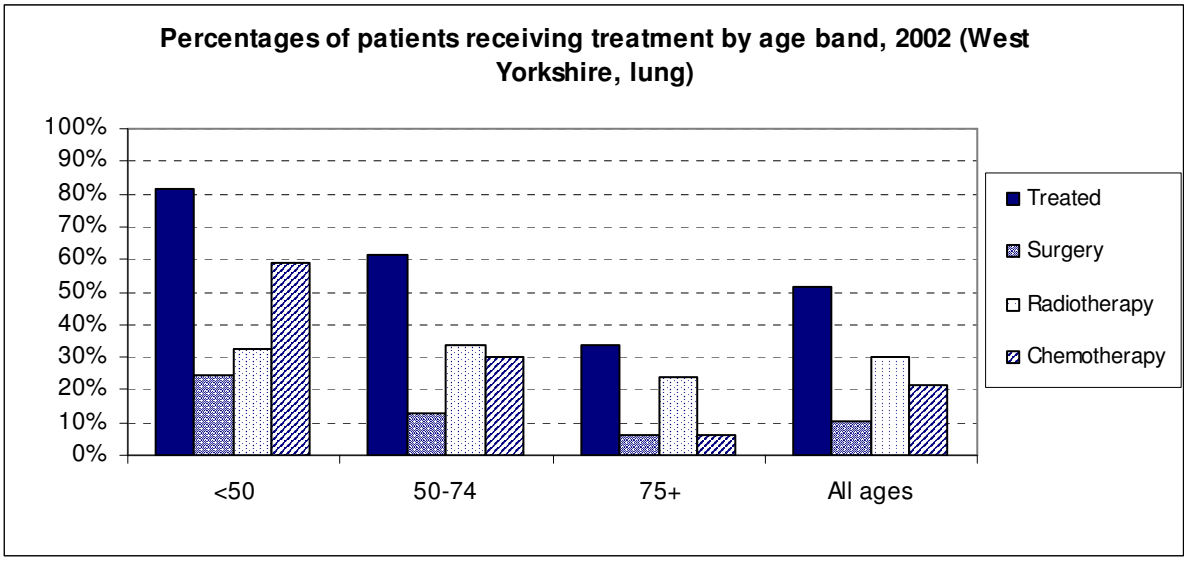
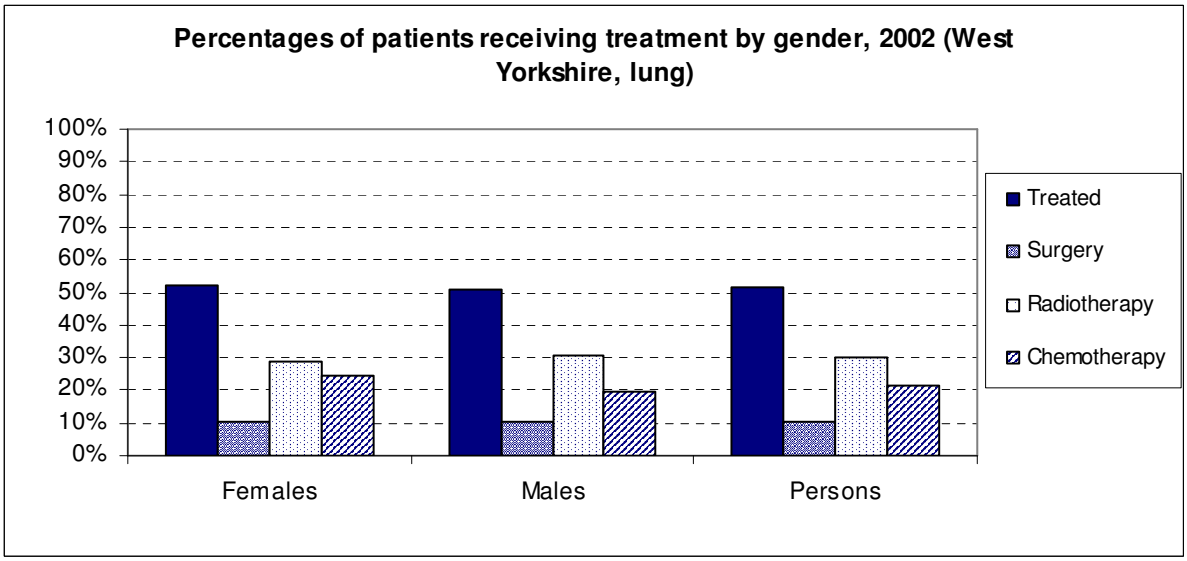


Figure 12: Gender



2. Geography

2.1. Need: Incidence and mortality

Figure 13 and
Figure 14 show incidence and mortality rates for lung cancer by PCT for 1998-2002 (five year average).

Incidence rates varied from 40.7 per 100,000 for Leeds North East PCT to 81.2 per 100,000 for South Leeds PCT.

Mortality rates showed similar variation for the period, and these appeared to relate closely to incidence in terms of individual PCTs.

2.2. Provision

2.2.1. Waiting Times – GP referral to diagnosis

Figure 15 shows large variation in waiting time to diagnosis for patients referred by their GP by PCT in 2002. For example, the percentage of patients waiting 2 weeks or less varied from 67% in South Huddersfield PCT to 22% in Calderdale PCT. PCTs have been clustered to help identify potential variation between providers.

2.2.2. Waiting Times - diagnosis to treatment

There was similar variation in waiting times from diagnosis to first treatment during the period (see
Figure 16). Again, South Huddersfield PCT had the highest percentage of patients waiting less than 4 weeks (48%). The lowest percentage was in Leeds East PCT (20%).

NB. See section 1.2.2 page 4 for explanation on calculation of waiting times.

2.2.3. *Treatment*

Figures 17 to **20** show percentage treatment rates by PCT. In 2002 59% of patients were treated in Huddersfield Central compared to 40% in North Bradford. There was large variation in treatment type by PCT particularly for radiotherapy, where 5% of patients in Airedale PCT were treated by radiotherapy compared with 37% in Wakefield West PCT.

2.3. Equity Issues

- The analysis shows fairly wide variation in levels of need across PCTs in West Yorkshire as measured by both incidence and mortality rates.
- There are also large variations in waiting times by PCT – though these do not appear to reflect variations in need (more likely to be influenced by variation in provider). These are also likely to have become more equivalent following the introduction of national standards.

Need - Incidence and Mortality

Figure 13: Incidence

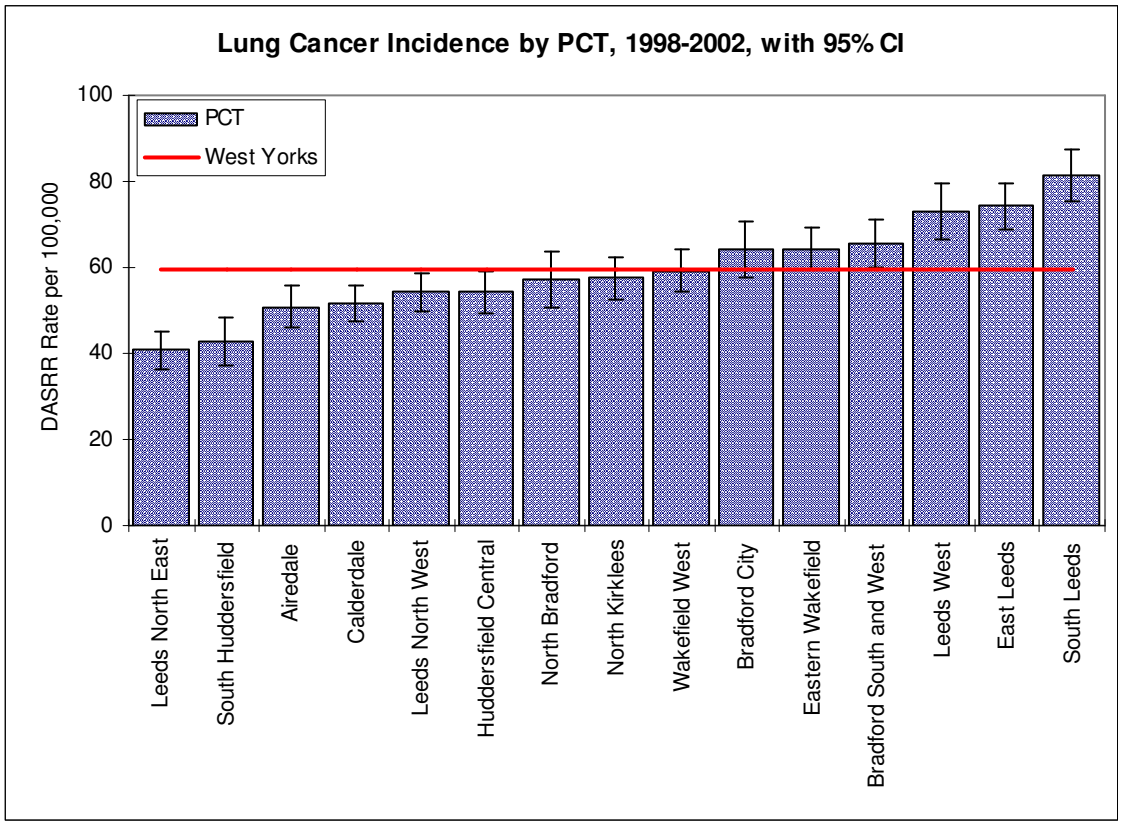
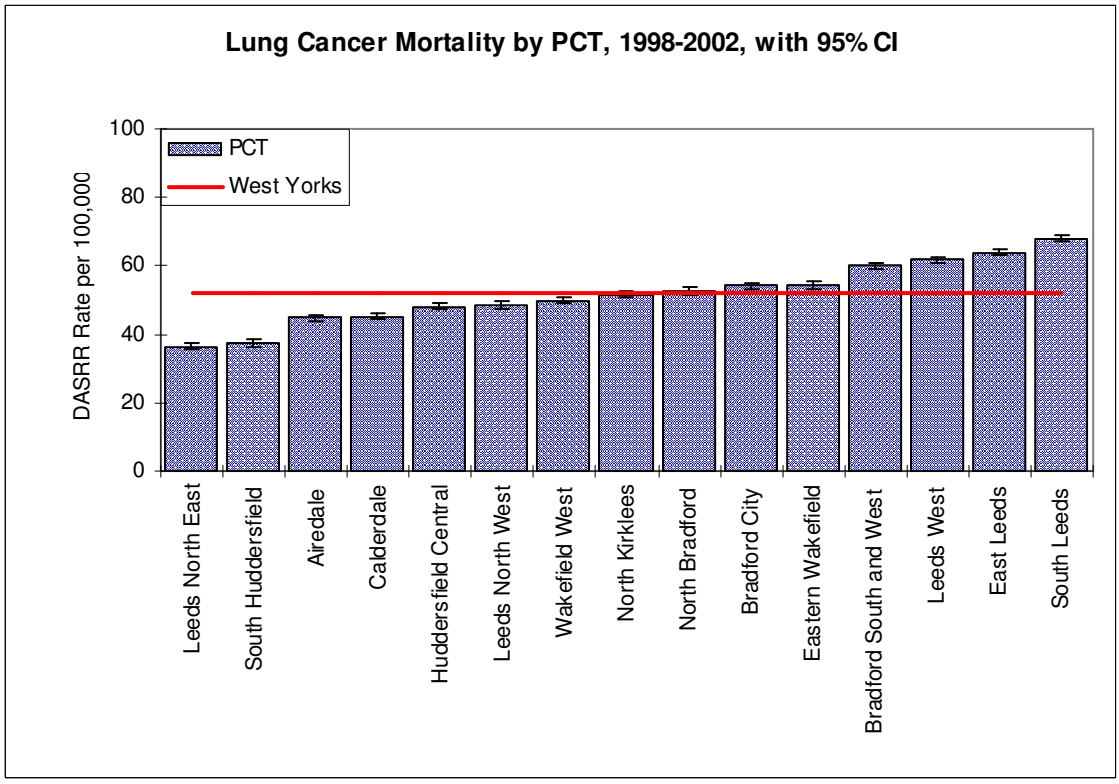


Figure 14: Mortality



Provision - Waiting Times

Figure 15: Referral to diagnosis

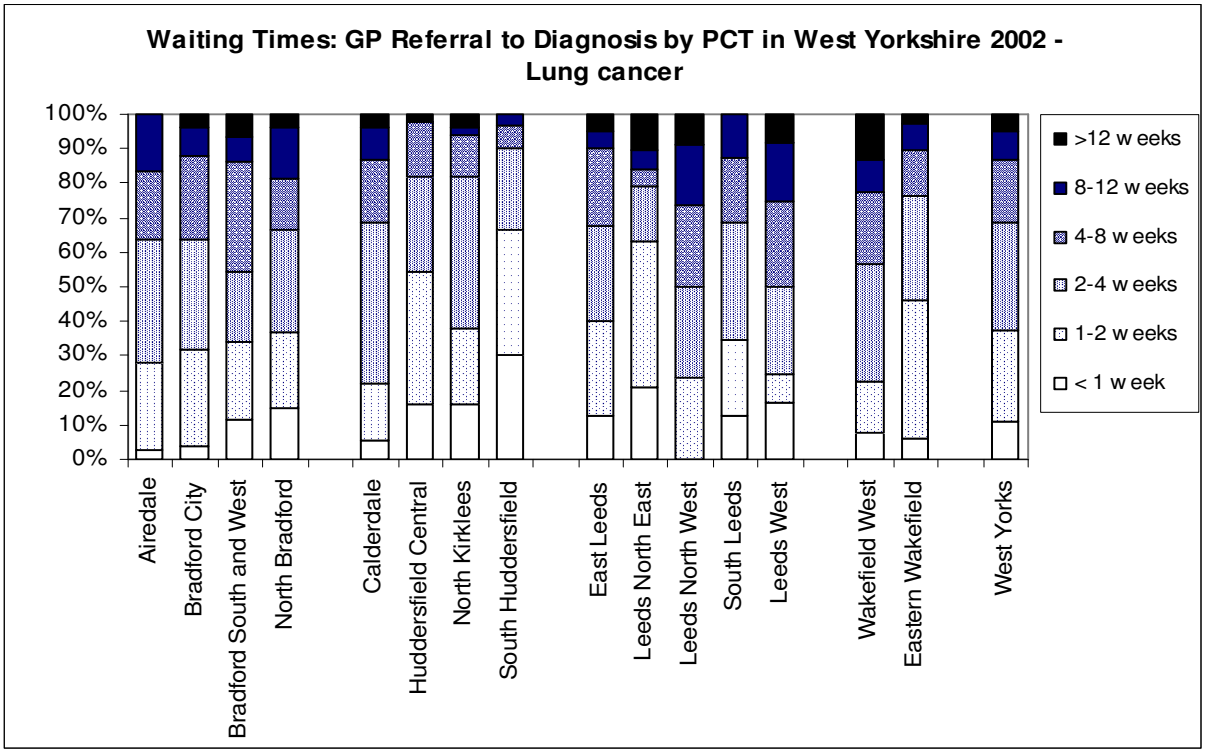
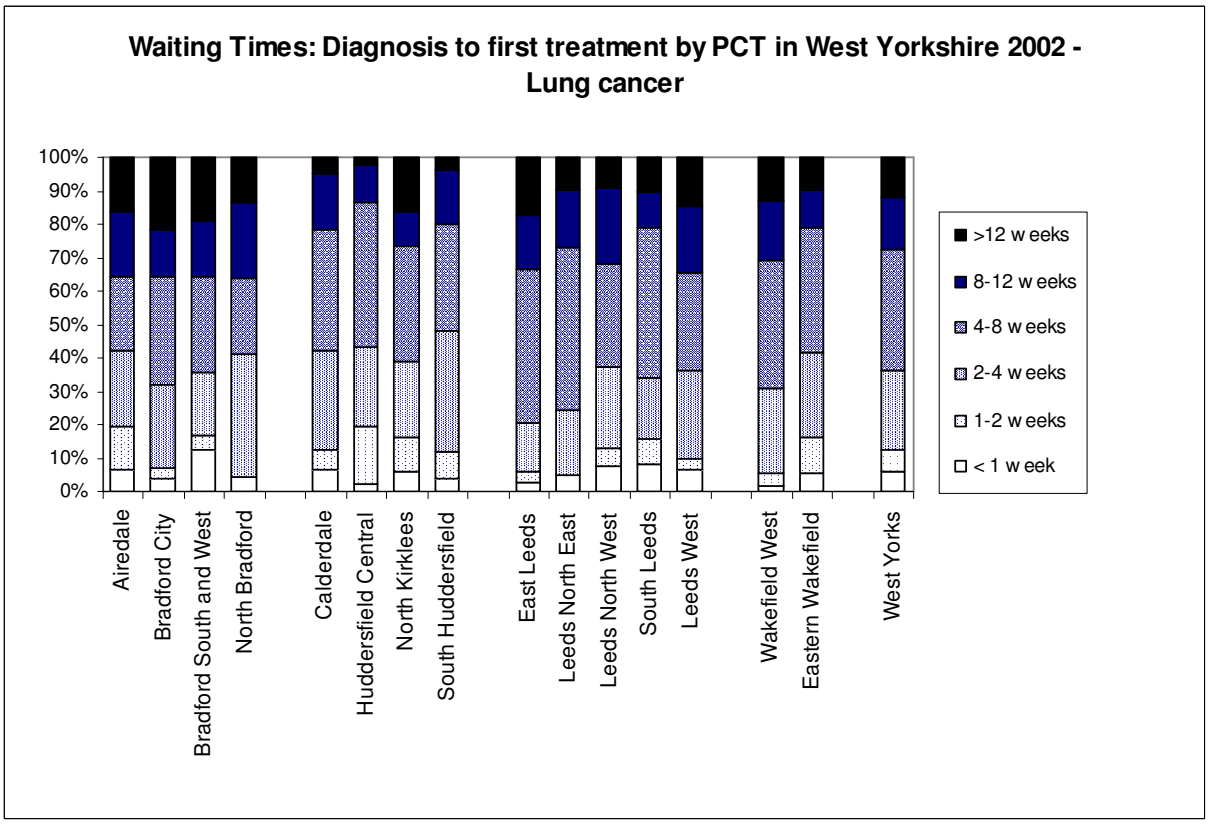


Figure 16: Diagnosis to first treatment



Provision – treatment type

Figure 17: treatment

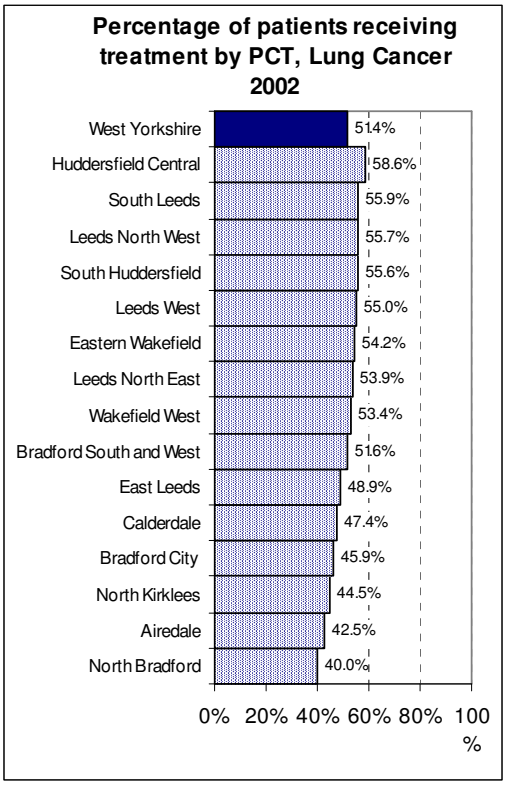


Figure 18: surgery

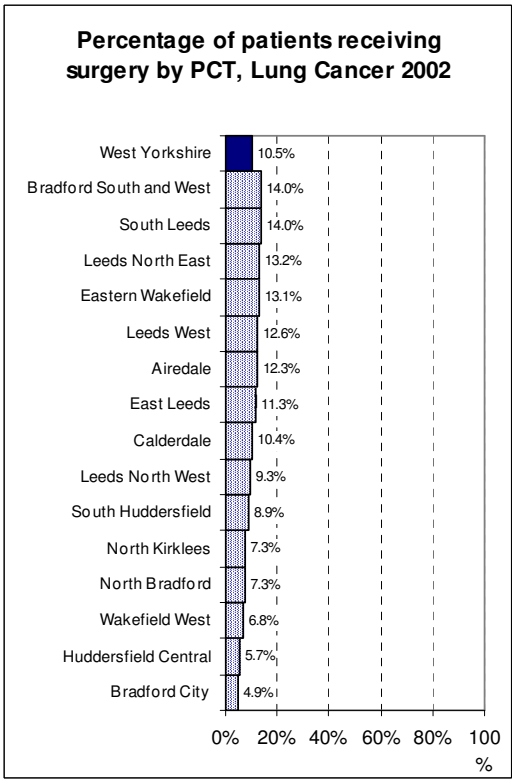


Figure 19: chemotherapy

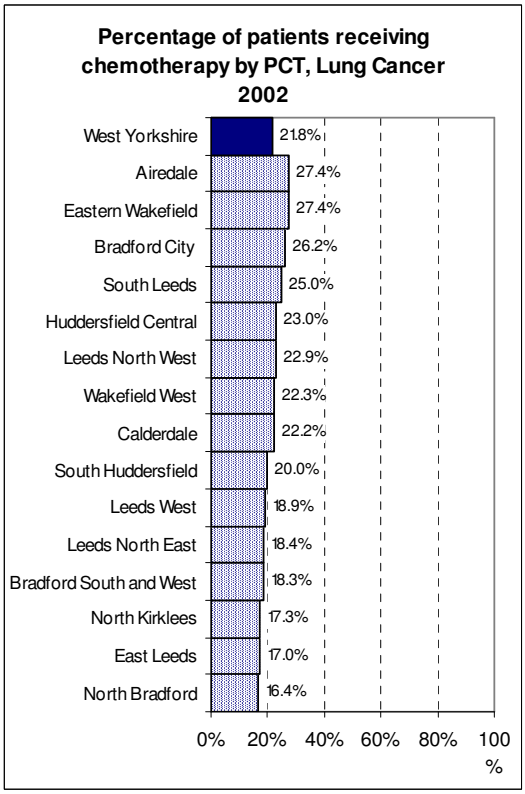
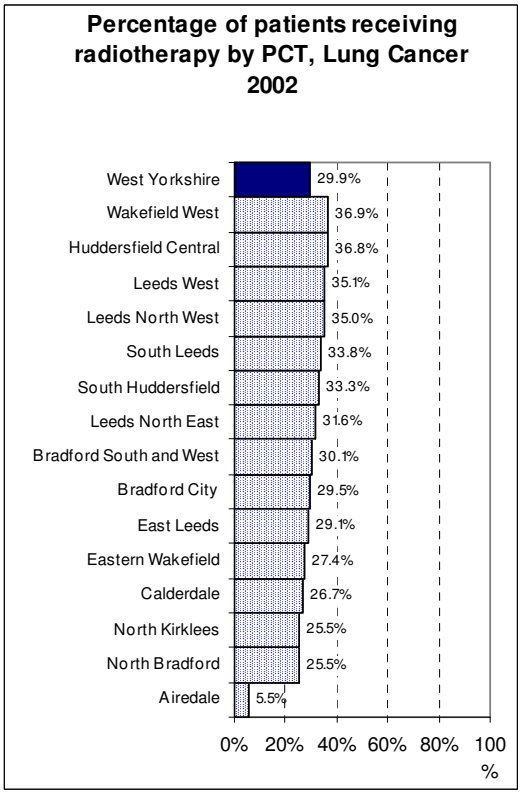


Figure 20: radiotherapy



3. Socio-economic deprivation

3.1. Need: Incidence and mortality

Figure 21 shows incidence and mortality rates for lung cancer by quintile of socio-economic deprivation for West Yorkshire for 1998 to 2002 (five year average).

These rates show a strong socio-economic gradient, with higher rates in the more deprived quintiles.

3.2. Provision

3.2.1. Waiting Times – GP referral to diagnosis

Figure 22 shows variation in waiting time to diagnosis for patients referred by their GP by deprivation quintile in 2002. The most affluent quintile (46%) were most likely to wait less than 2 weeks from referral to diagnosis, though there was little evidence of socio – economic gradient across all other groups.

3.2.2. Waiting Times - diagnosis to treatment

The pattern was similar in diagnosis to treatment times by deprivation quintile with 42% of the most affluent quintile waiting less than four weeks from diagnosis to first treatment compared with 29% in the most deprived quintile (see **Figure 23**).

3.2.3. Treatment

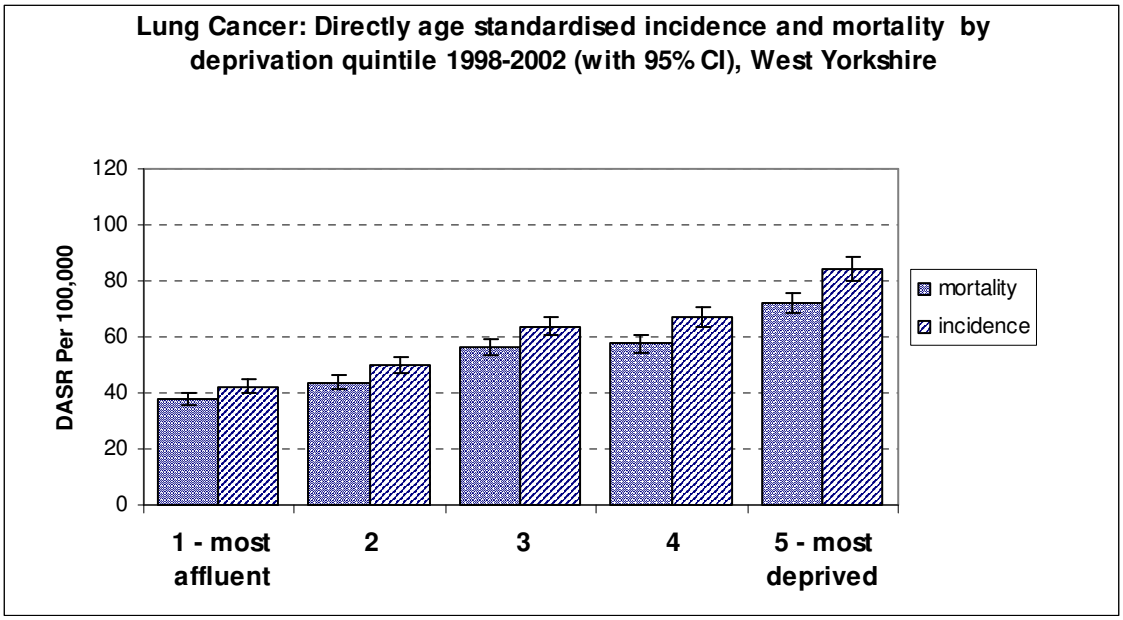
Treatment rates were similar for all quintiles, although there was there a slight socio-economic gradient in overall treatment rate with rates higher in the more affluent quintiles (see **Figure 24)**.

3.3. Equity Issues

- Need as measured by incidence or mortality was higher in the more deprived populations; however some of the evidence from the service data available seems to suggest that the pattern of provision did not reflect this need.
- Waiting times for both diagnosis and treatment were shorter in the most affluent quintile.
- The analysis also suggested possible socio-economic inequalities in treatment rates for lung cancer.

Need: Incidence and Mortality

Figure 21



Provision: Waiting Times

Figure 22

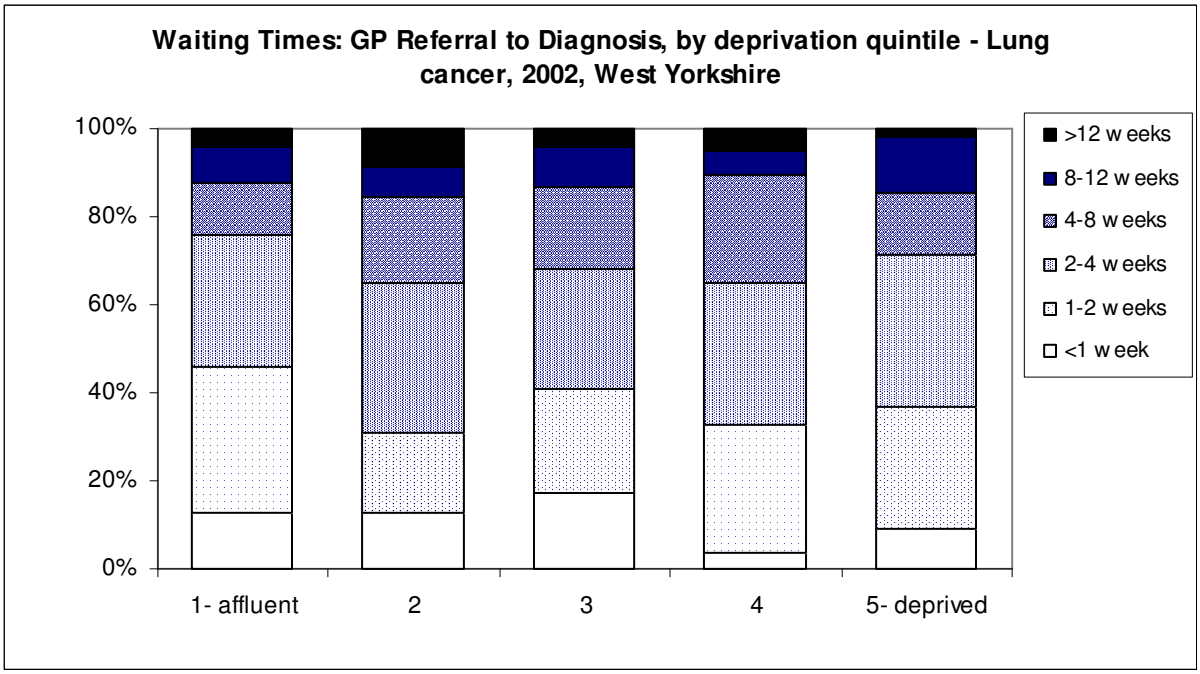
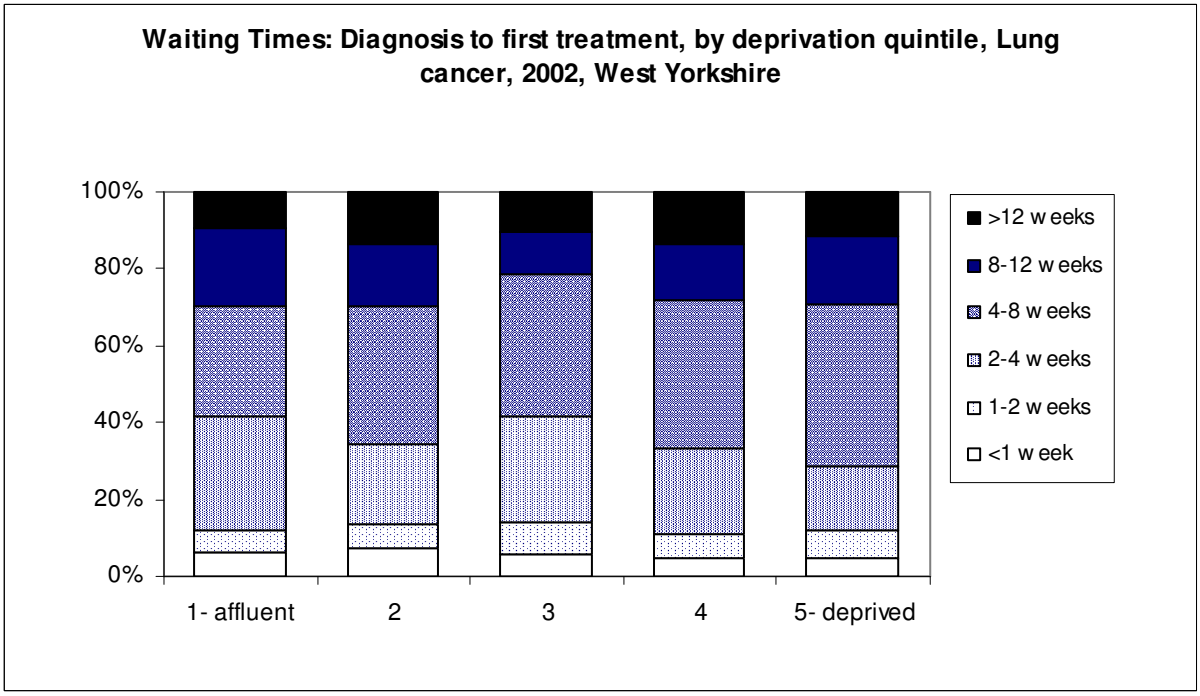
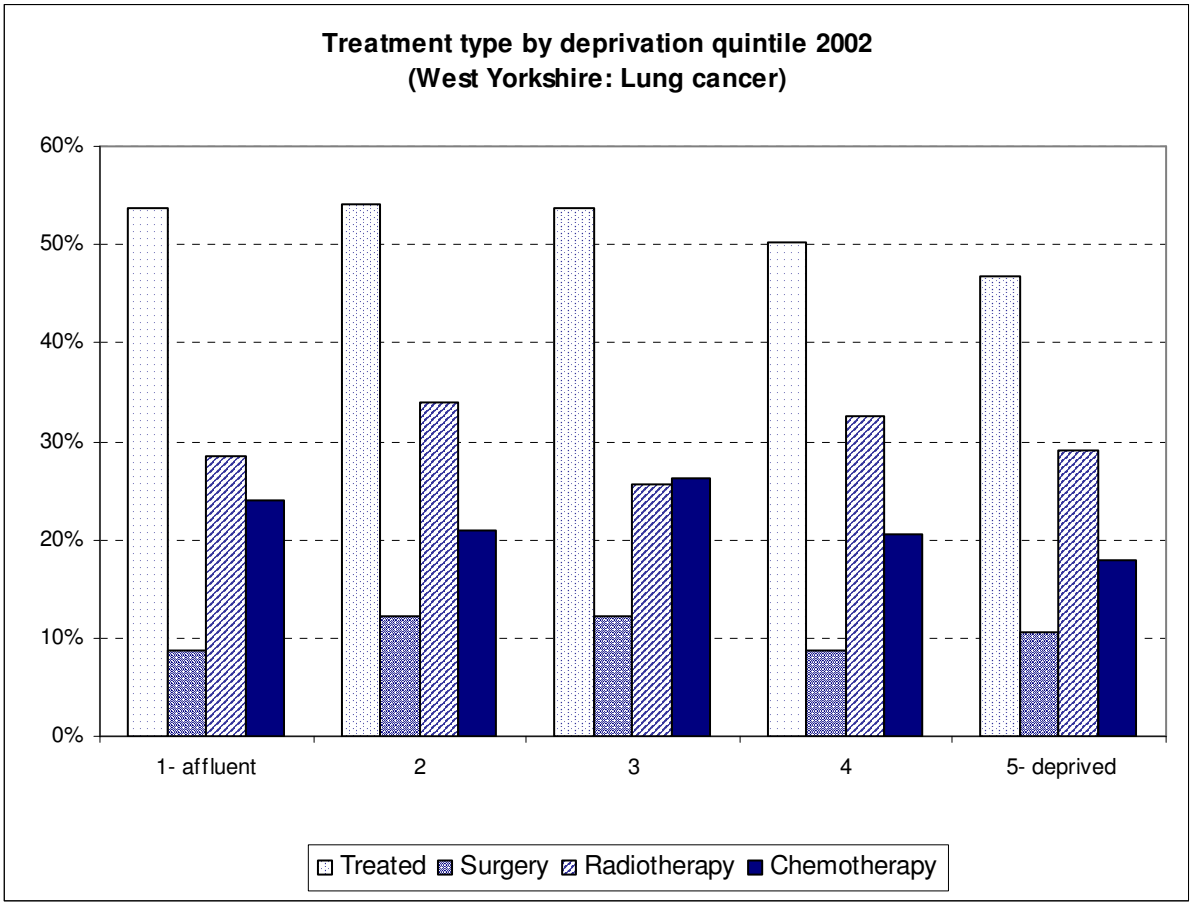


Figure 23



Provision – treatment type

Figure 24



4. Summary

- Although incidence and mortality rates in lung cancer increased dramatically with age, analysis of service provision is difficult to interpret in terms of equity, as elements of service provision are affected by these factors.

- Incidence and mortality is significantly higher in males than females though there appears to be little variation in service provision between the sexes.

- The analysis showed some evidence of variation in service provision related to socio-economic status.

- The main evidence of variations in service provision appears to be geographical and age related rather than by gender or socio-economic status. These variations did not appear to relate to need as measured by mortality or incidence. The variations found may actually relate primarily to provider variation across West Yorkshire.

- The analysis has only looked at four dimensions of equity. Others such as ethnicity, disability, rurality or access (other than geographical variation) have not been considered.

- This profile focuses on a limited number of measures of secondary care provision for lung cancer. The equity profile could encompass a huge range of measures looking at prevention as well as other measures of treatment and service provision– e.g. primary care provision, staffing numbers, survival rates etc.

- As with all cancers, lung cancer is a complex area around which to undertake equity profiling. Future profiles may benefit from a much more specific focus, for example looking at a single measure of provision in more detail, perhaps focussing on a single dimension of equity.

- Finally, given the national focus around developments of standards in service provision in secondary care, it may actually not be possible to use the results of equity profiling to inform changes to the way these services are delivered. A more useful approach may be to focus profiling activities in areas such as cancer prevention or primary care provision where there may be more scope for reconfiguring local services to reflect variation in need.

Next steps

- Discuss with cancer leads and commissioners across the SHA area.

- Identify any possible actions to address issues raised.

- Identify further more specific analysis requirements around equity profiling in this area.

- Undertake further analysis at PCT level, if required (completed by local teams).

References

1. Department of Health. Tackling health inequalities: a programme for action. London: Department of Health, 2003 (July).
2. Department of Health. National Standards, Local Action: Health and Social Care Standards and Planning Framework 2005/6-2007/8. London: Department of Health, 2004 (July).
3. http://ratings2004.healthcarecommission.org.uk/Trust/Indicator/IndicatorDescriptionShort.asp?IndicatorId=4247 (Healthcare Commission URL).
4. Aspinall PJ & Jacobson B. Health Equity Audit: A Baseline Survey Of Primary Care Trusts In England (Pre-Publication Draft). Association of Public Health Observatories/London Health Observatory. 2004 (September).

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Appendix: Data Sources and Notes

1. Population

Source: ONS Mid 2001 population estimates (revised September 2004)*

*except for IMD quintile calculation – based on Census 2001 ward populations

2. Mortality

Source: ONS annual deaths extract

Period: 1998-2002

ICD Codes: Lung Cancer C33-C34

Standardisation method: Directly age standardised annual mortality rate, using European Standard population. 95% CI use 'Byar's method'

3. Incidence

Source: NYCRIS, extracted 2/11/2004

Period: 1998-2002

ICD Codes: Lung Cancer C33-C34

Standardisation method: Directly age standardised annual incidence rate, using European Standard population. 95% CI use 'Byar's method'

4. Waiting Times

Source: NYCRIS, extracted 2/11/2004

Period: 2002

ICD Codes: Lung Cancer C33-C34

Notes:
GP referral to diagnosis times only includes records where a GP referral date has been recorded.
GP referral date, diagnosis date and first treatment date are all collected within the cancer registry definition and are not necessarily the same as those data items collected for the Cancer Waiting Times Database. The data also relate to the whole population, not just those urgently referred.

5. Treatment Types

Source: NYCRIS, extracted 2/11/2004

Period: 2002

ICD Codes: Lung Cancer C33-C34

6. Socio-economic deprivation

Source: Indices of Multiple Deprivation 2004, ward scores, (ODPM 2004)

Quintiles based on West Yorkshire population (Census 2001).