

Mortality, Incidence and gender -

Malignant Melanoma

Background

The incidence of malignant melanoma is reported to be increasing every year in England. Malignant melanoma is the form of skin cancer associated with a higher mortality. It is important to monitor these rates over time and to understand in what groups within the population this increase is seen, in order to promote early diagnosis and prevention. We report a study performed to address this. Overall the mortality rate associated with malignant melanoma is relatively low but there have been reports of differing trends in the mortality of males compared to females and variation at regional level. One reason could be late presentation and staging data would be an important tool to clarify this. Historically cancer registries have focused on collecting Clark's level as a measure of stage but the American Joint Committee on Cancer staging is preferable and an international standard. At present, data items related to the thickness of the tumour are collected with various level of completeness in England - Breslow's thickness and T value, which is the extent of the primary tumour (as part of TNM staging). We used the T values to see if there was a link between the thickness of the tumour and the gender of the patients.

KEY MESSAGE:

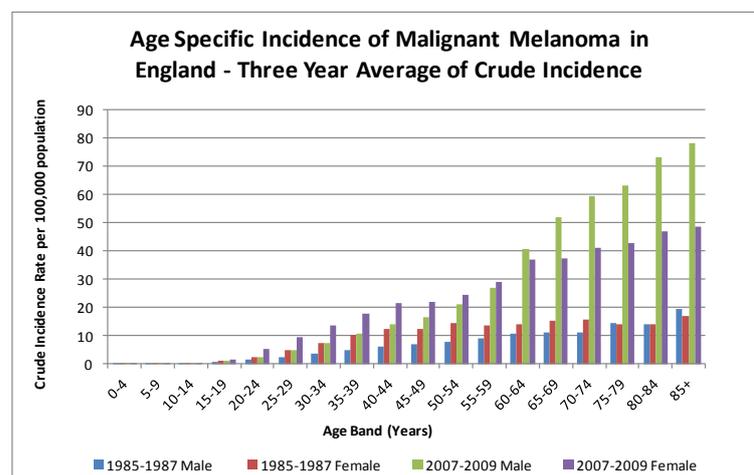
Mortality rates from malignant melanoma in England are increasing especially in older men: these rates are influenced by the increasing incidence of cases over the years. This study also shows that males present with thicker tumours that could explain at least in part their higher mortality rate.

Method

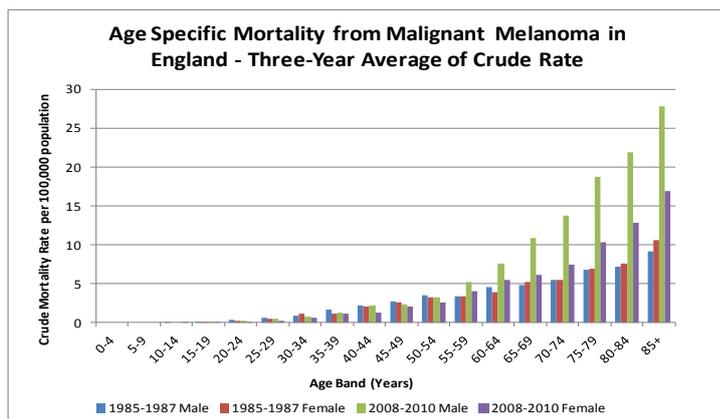
Crude incidence rates were extracted from the Cancer Information System for the years 1985-87 and 2007-09 for patients diagnosed with malignant melanoma of the skin (ICD Code - C43). Mortality rates for 1985-87 and 2008-10 for patients who had a malignant melanoma of the skin as their underlying cause of death were also extracted. The National Cancer Data Repository was used to extract the tumour thickness data and to calculate the age standardised incidence rate (2007-09). Office for National Statistics Mortality Data were used to calculate the standardised mortality rates (2008-10). Data on the thickness of the tumours were extracted for three cancer registries in England, which had similar level of completeness for 2007-09 (*Eastern Cancer Registration & Information Centre (83%), South West Public Health Observatory (91.5%), West Midlands Cancer Intelligence Unit (93%)*).

Age specific incidence rate for Malignant Melanoma in England

The incidence of malignant melanoma showed a marked increase over the last decades with incidence for males increasing faster than that of females. In both cohorts, females presented with a higher incidence in the younger age band but males overtook and equaled females in the over 75 years age band in 1985-87 and in the over 60 years age band in 2007-09. The overall ratio of male to female incidence was 0.6 in 1985-87 and 0.9 in 2007-09.

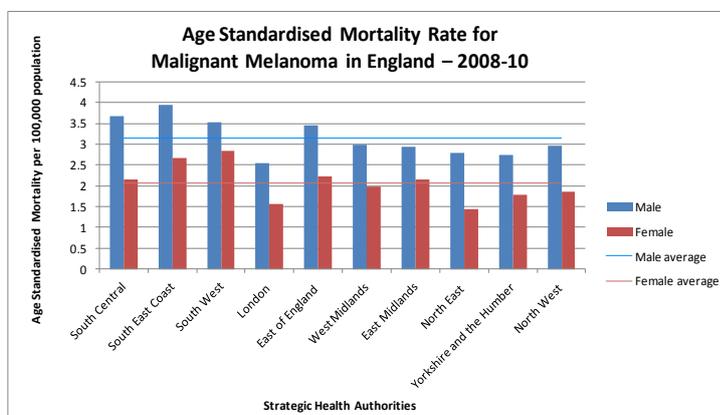


Age specific mortality rate for Malignant Melanoma in England



The mortality from malignant melanoma showed an exponential increase especially in males in 2008-10. The mortality was to some extent a reflection of the increased incidence however the exponential aspect of the graph illustrated a higher mortality in older patients. Age is an independent predictor of melanoma mortality but this may also result from late presentation of patients with more advanced tumours. The overall ratio of male to female mortality was 0.9 in 1985-87 and 1.31 in 2008-10.

Age Standardised Mortality Rate for Malignant Melanoma by Strategic Health Authorities in England



The standardised mortality rates (SMR) by Strategic Health Authorities showed a variation in mortality across England and between males and females. The average SMRs in England (2008-10) for males and females were 3.1 v 2.0 per 100,000 respectively. The age standardised incidence rates in England (2007-09) for males and females were 16.6 v 17 per 100,000 respectively. Overall data on thickness showed that in 2007-09, 45% of males

v 53% of females had tumours thinner than 1mm (T1) and 22%, 19% and 14% of males v 21%, 15% and 10% of females were 1.01-2mm (T2), 2.01-4mm (T3) and >4mm (T4) respectively. In addition 4% of cases under 50 years old were T4 v 14% of 50 years old and over.

Conclusion

The incidence of malignant melanoma in males is increasing faster than that of females, particularly over the age of 65. The differential between male and female mortality was more marked than the incidence. There was also clear variation of the mortality rate at regional level reflecting partly the variation in incidence but also showing a gender gap. Based on a sample of the population for England, males seemed to present with thicker tumours which with other morbidity and health related behaviour attitudes could affect their mortality rates. Male sex and increased age are independent adverse predictors of mortality from melanoma in large international data sets and therefore further work will be carried out to better understand the significance of these data.

FIND OUT MORE:

[South West Public Health Observatory](#)

South West Public Health Observatory is the lead Cancer Registry for Skin Cancer

<http://www.swpho.nhs.uk>

Other useful resources within the NCIN partnership:

Cancer Research UK CancerStats – Key facts and detailed statistics for health professionals

<http://info.cancerresearchuk.org/cancerstats/>

The National Cancer Intelligence Network is a UK-wide initiative, working to drive improvements in standards of cancer care and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research. Sitting within the National Cancer Research Institute (NCRI), the NCIN works closely with cancer services in England, Scotland, Wales and Northern Ireland. In England, the NCIN is part of the National Cancer Programme.