The Incidence of Soft Tissue Sarcomas in England

West Midlands Cancer Intelligence Unit (United Kingdom)

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The availability of key statistics such as incidence is crucial to understanding both the epidemiology of cancer and the demand on services. The most robust incidence statistics come from population based national datasets. However, national statistics on the incidence of tumours in England have historically been produced by ICD-10 site codes. As soft tissue sarcomas (STS) may arise in any site and are identified by morphology, incidence rates specifically for soft tissue sarcomas have not been available in England. As the lead cancer registry for sarcomas in the UK, the West Midlands Cancer Intelligence Unit aims to make incidence rates of soft tissue sarcomas nationally available.

Method:

Population based data were collected by the eight English Cancer Registries from 1979 to 2006. These data were collated by the lead registry. Soft tissue sarcomas were identified by morphology, with relevant morphology codes being identified by the national clinical reference group. The incidence rate of these sarcomas was analysed by key variables, including incidence over time, incidence by morphology, incidence by cancer site, incidence by age, and age standardised incidence.

Tumours included and excluded from the analysis:

Included:

Any invasive malignant sarcoma which can affect the soft tissue (as defined by the NCIN Site Specific Clinical Reference Group)

Excluded:

Site codes: C40 & C41 (Bone), C43 & C44 (Skin), C77 – C79 (Secondary Malignant neoplasms)

Benign or in-situ tumours

Morphologies: M8832 (Dermatofibrosarcoma), M8940 (Mixed tumour), M9140 (Kaposi's)

Figure 1: Time trend of STS diagnosed in England (1979 – 2007)

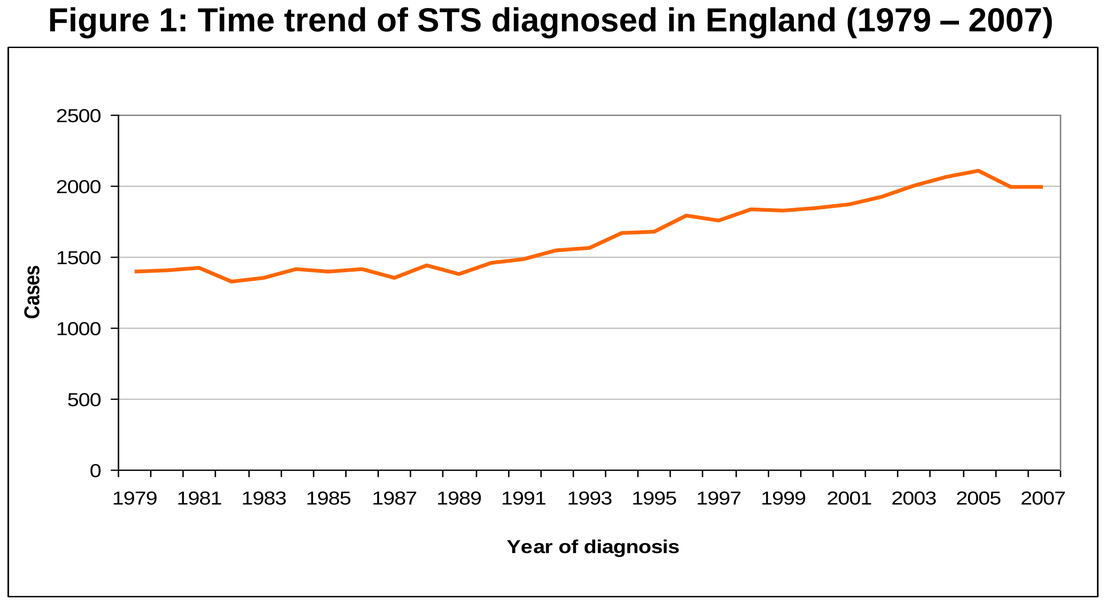

Figure 1 demonstrates a steady increase in the number of soft tissue sarcomas diagnosed annually. Some of this may be due to true increased incidence, which may be driven by the aging population. However, it is not possible to separate changing epidemiology from improved awareness and diagnostics.

Figure 2: Age specific rates by gender (1979 – 2007)

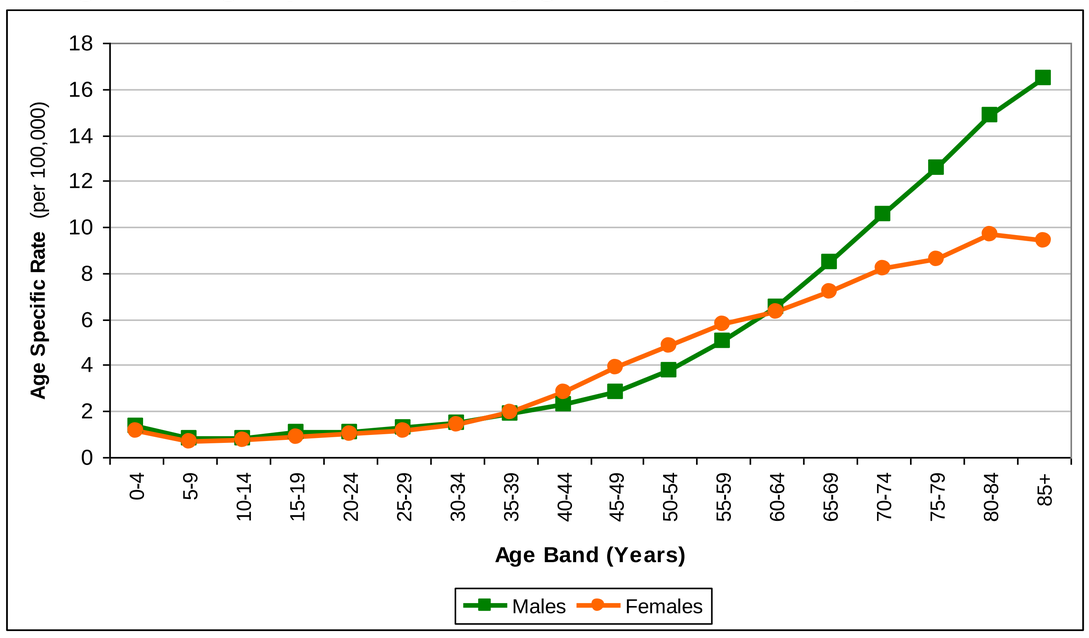

Figure 2 shows the age specific rates of STS. The majority of soft tissue sarcomas are diagnosed in the over 70s.

This age profile suggests that we will continue to see a rise in incidence in STS as the population of England is aging, and the number of over 70s is predicted to continue to rise.

Figure 3: Age standardised rates of most common STS

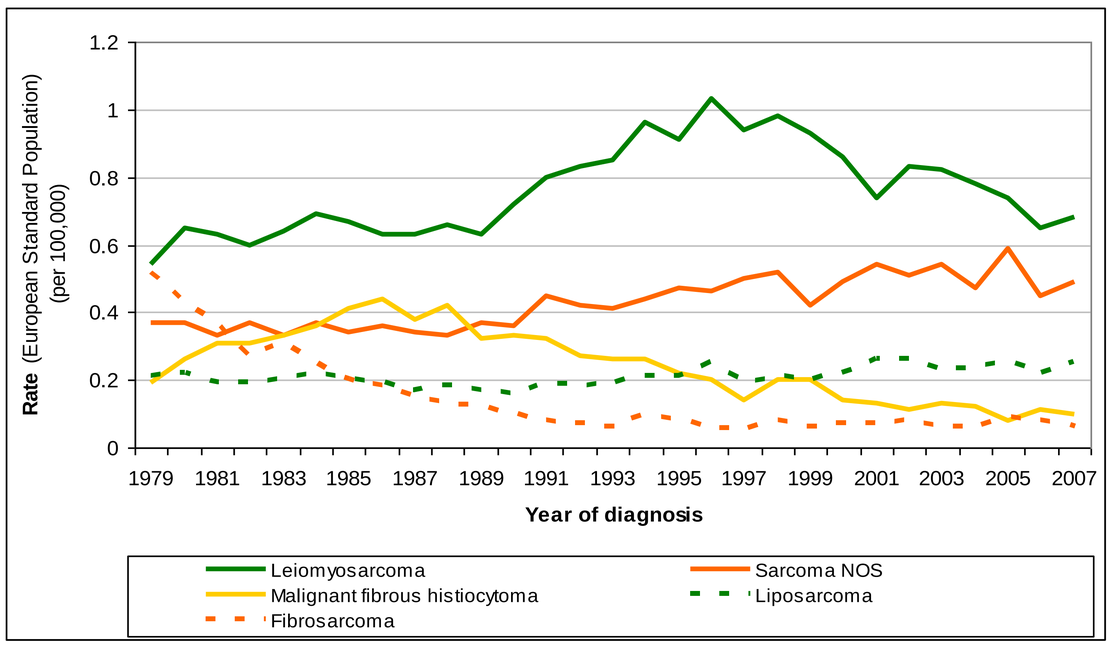

Figure 3 shows the trend over time of the age standardised rates for the five most common STS morphologies.

Fluctuations in these rates may be caused by changing awareness and diagnostic tests, but may also be driven by changing coding practise in the registries. GISTs were coded as leiomyosarcomas until 2000, but then reclassified, contributing in part to the observed decrease in leiomyosarcomas. MFH were reclassified to sarcoma NOS which explains the inverse trends seen in these morphologies.

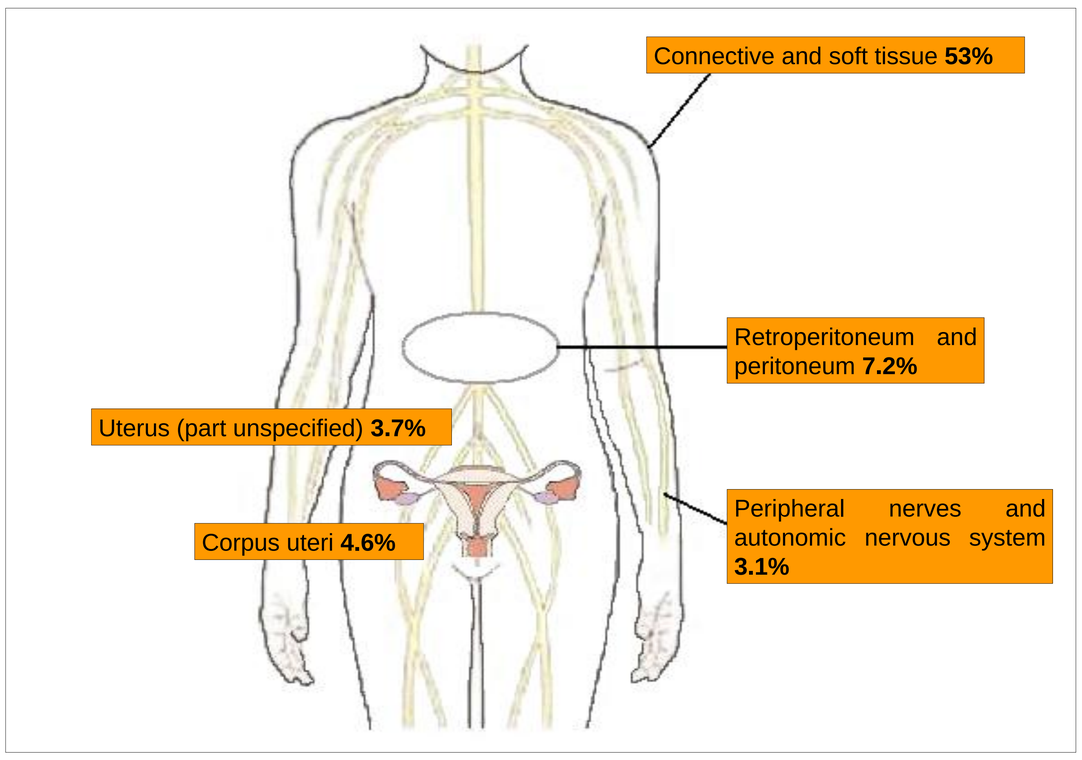

Figure 4: Percentage diagnosed by most common cancer site

Conclusion: Around 2000 soft tissue sarcomas were identified annually in England from cancer registry data. The reported incidence of soft tissue sarcomas has risen steeply over the past 25 years, but it is not clear if this is due to true increased incidence, or better identification, reporting, and coding. There has also been an increase in the number of separate morphologies recorded by cancer registries. Incidence by morphology varies on a very short timescale, and may reflect improved diagnostic techniques more than biological changes. Moreover, the classification of morphology code and site of diagnosis combinations which are counted as a soft tissue sarcoma will vary amongst researchers and scholars, so until this in itself can be agreed at a national level, a consistent estimate of the number of 'soft tissue sarcomas' cannot be produced.

The WMCIU would like to thank the NCIN, Rob Grimer and Chas Mangham for their help and support

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