Reviewer's report


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Reviewer: Dae-Geun Jeon

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Reviewer Comment

This study describes incidence and survival patterns of 509 bone cancers diagnosed during 1981 – 2002 in Northern England. The authors conclude that reasons for poorer survival in older Ewing sarcoma patients and failure to significantly improve survival for osteosarcoma patients should be investigated.

Introduction

1. The aim of the present study was to describe the incidence and survival from bone cancer diagnosed in 0 – 39 year olds in northern England during the period 1981 – 2002 and to compare patients aged 15 – 39 years with those aged 0 – 14 years.

; The authors state that a substantial proportion of the 0 – 39 year old patients likely be treated according to trial protocols. Therefore, they made cut-off of less than 40 years old. The author's assumption is correct. But this kind of epidemiologic study seems to stress more on the incidence of bone cancer rather than the survival.

As the study span more than twenty years, during this time, there would be roughly two changes. One is early diagnosis (1980s vs 1990s) due to the advance in imaging modality and the other would be whether there is a change in the incidence of bone cancer in older (>40 years) patients due to increased life span. The readers would be more curious about those two figures. However, older age (>40 years) is beyond the scope of this study.

Result

There is no problem in statistical analysis itself

Discussion

1. Our data have shown that survival for northern England was better for osteosarcoma (58%) but worse for Ewing sarcoma (43%). Data from the United States National
Cancer Database including patients of all ages also reported worse five-year survival (51.2%) for osteosarcoma and better five-year survival (50.2%) for Ewing sarcoma [21].

-> The better survival of osteosarcoma in this study over United States would be due to an exclusion of old age (>40 years old) patients.

2. A number of studies have reported worse survival from osteosarcoma in older adults [21, 24, 25].

-> Most of the studies state worse survival of osteosarcoma over age 40 years old. As this study limited the age under <40 years, it is no wonder that there is no survival difference (0-15 vs 15-39).

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**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'