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HIGH PROPORTION OF ADOLESCENT AND YOUNG ADULT MYELODYSPLASTIC SYNDROME IN A DEVELOPING COUNTRY: AN EPIDEMIOLOGICAL STUDY USING THE JORDAN CANCER REGISTRY AND THE SEER DATABASE FROM 2009-2019

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INTRODUCTION

Cases of Myelodysplastic Syndrome (MDS) in adolescents and young adults (AYA) are under-studied, especially in developing countries. Previous studies have shown that the median age of diagnosis of MDS in Jordan was 59 years, compared to the us median age of diagnosis at 76-77 years.

AIM

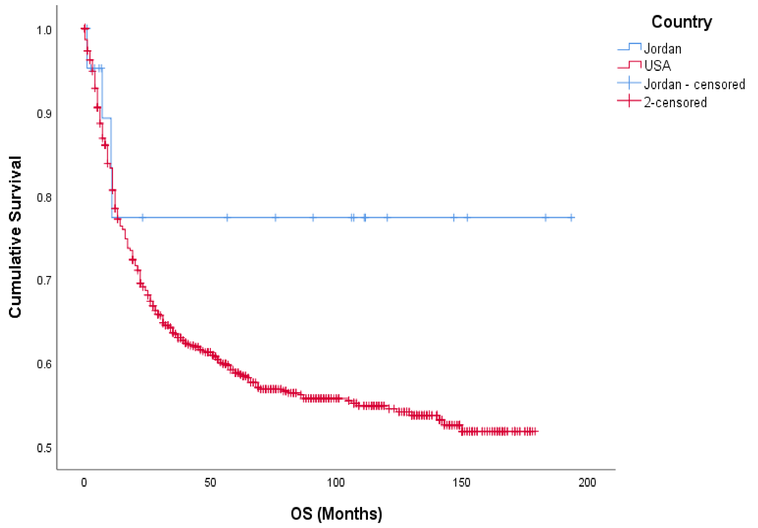
To compare proportions of AYA in MDS between a developing and developed country. In addition to comparing the epidemiology of AYA in MDS. This was done by comparing percentage of AYA MDS cases, range of ages, age at diagnosis, male to female ratios, and survival between Jordanian and US patients.

METHOD

Our study uses a cohort of Jordanian MDS patients from 2007-2021 diagnosed at a tertiary hospital. In addition to MDS patients from the SEER database. A cohort of MDS patients diagnosed at Jordan University Hospital, compared to a cohort of MDS patients from the 17 registry SEER database diagnosed from 2007-2021. All patients older than 18 years old diagnosed with MDS were included in our study. AYA MDS was defined as patients diagnosed with MDS at an age between 18-39.

RESULTS

A total of 98 patients were included from Jordan, and 40305 from the SEER database. The percentage of AYA patients in the Jordanian cohort was 23.5% (23), compared to 1.7% (751) in the US population ($p < 0.001$). The percentage of males in AYA MDS patients was 39.1% for Jordanian patients, and 52.3% for US patients. The mean age at diagnosis varied significantly, with a mean age of 30.26 for Jordanian patients, compared to 24.4 ($p = 0.01$). The number of cases diagnosed per year were relatively stable for both countries, with a small spike at 2009-2010 for Jordanian patients. Overall survival was similar for patients in both countries with a mean OS of 107 months for US patients, in comparison to a mean OS of 151 months in Jordanian patients



	US	Jordan
Patient No.	40305	98
% of AYA	1.7	23.5
Median Age	27	32.00
Mean OS	107	151
% of Males	52.3%	39.1%

CONCLUSIONS

There was a significantly higher proportion of AYA MDS cases in Jordan, with a higher percentage of males, and different overall survival. This highlights the considerably great differences in epidemiology between developing and developed countries in MDS.

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