

## Letter to the Editor

# Increased Trend of Haematological Malignancies in Kurdistan Region/Iraq

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### Dear Editor

We read with great interest the paper by Khoshnaw and his colleagues studying the incidence of cancer in Sulaymaniyah governorate in Kurdistan Region-Iraq, where they found increasing incidence of cancer over the period of study 2006-2014. A total of 8,031 cases were recorded over 8 years, it was shown that the annual incidence rate (AIR) increased from 38 to 61.7 cases/100,000 population from 2006 to 2013 in Sulaymaniyah Governorate. The most common five cancers in males with AIR per 100,000 populations were lung (7.1/105), leukemias (4.5/105), lymphoma (4.3/105), colorectal (3.9 /105) and prostate (3.5/105) whereas in females the most reported cancers were breast 17.1/105, leukemias 3.7/105, lymphoma 2.9/105, colorectal 2.9/105 and ovarian cancers 2.2/105 (Khoshnaw et al., 2015).

Although Sulaymaniyah is one of the three governorates in Kurdistan region, cancer incidence in this city does not reflect the true burden of the diseases in Kurdistan. In our first report about cancer incidence in Kurdistan, we reported that haematological malignancies were the most common type of malignancies in males followed by lung cancer while in females haematological malignancies followed breast cancer (Othman et al., 2011). We believe that the data presented by Khoshnaw et al did not reflect the real incidence as the population involved in their study was about 2 million which was smaller than what we presented in our study (about 5 million). Additionally, they calculated the mean of the incidence over the period of study (2006-2013). When a more detailed yearly breakdown of lung and haematologic malignancies was performed, it was concluded that the difference in incidences of different tumors between our study and their study was negligible. To exemplify this the difference was small in regard to percentages of haematological malignancies as they found haematological malignancies constituted about 21.13% of all cancer in males compared to 22.9% in our results. While in female haematological malignancy constitute about 18.8% compared to 17.6% in our paper. Finally, in females, same observation was found for haematological malignancies as the second common malignancy after breast cancer.

The cancer incidence is increasing all over the world and cancer related morbidity and mortality is a major health concern in developing countries (Ferlay et al., 2002, Habib et al., 2007, Al-Humadi, 2009, Mousavi et al., 2009, Runnak et al., 2012). Kurdistan Region as a

part of Iraq has been exposed to many environmental and epidemiological changes that predispose to increase risk of cancer in this region. In the last two decades, there has been a shift towards the western-style of living and dietary habits of Kurdish people that might affect the pattern of increasing cancer incidence in this region. In addition, the effects of chemical hazard of the Iraqi/Iranian War for 8 years (from 1980-1988) and use of Chemical weapons of mass destruction against Kurdish people by the Central Government (Chemical Bombardment of Halabja City in Kurdistan on 1988; Salih 1995) played an important role in increasing cancer incidence especially haematological malignancies.

In agreement with findings of Khoshnaw et al's paper and results from other part of Iraq, there is a trend toward a significant increase in cancer in Kurdistan Region-Iraq. The factors that contribute to the high incidence rate of haematological malignancies in our population need further epidemiological studies and it is an important area for future research.

### References

- Al-Humadi AH (2009). Epidemiology of colon & rectal cancer in Iraq. *World J Colorectal Surg*, 1, 15.
- Ferlay J, Bray F, Pisani P, et al. (2002). GLOBOCAN. Cancer incidence, mortality and prevalence worldwide. IARC Cancer Base No. 5, version 2.0 2004.
- Habib OS, Al-Ali JK, Al-Wiswasi MK, et al. (2007). Cancer registration in Basrah 2005: preliminary results. *Asian Pac J Cancer Prev*, 8, 187-90.
- Khoshnaw N, Mohammed HA, Abdullah DA (2015). Patterns of cancer in Kurdistan - results of eight years cancer registration in Sulaymaniyah Province-Kurdistan-Iraq. *Asian Pac J Cancer Prev*, 16, 825-31.
- Mousavi SM, Gouya MM, Ramazani R, et al. (2009). Cancer incidence and mortality in Iran. *Ann Oncol*, 20, 556-63.
- Othman RT, Abdulljabar R, Saeed A, et al. (2011). Cancer incidence rates in the Kurdistan region/Iraq from 2007-2009. *Asian Pac J Cancer Prev*, 12, 1261-4.
- Runnak MA, Hazha MA, Hemin HA, et al. (2012). A population-based study of Kurdish breast cancer in northern Iraq: hormone receptor and HER2 status. A comparison with Arabic women and United States SEER data. *BMC Womens Health*, 12, 16.
- Salih K (1995). Anfal: The Kurdish Genocide in Iraq. *Digest of Middle East Studies*, 4, 24-39.

**Ramadhan T Othman\*, Nawfal R Hussein**

*Ramadhan T. Othman and Nawfal R Hussein*  
*Department of Internal Medicine, Faculty of Medical Sciences,*  
*University of Duhok \*For correspondence: ramadhan.othman@*  
*uod.ac*