# ARTICLE IN PRESS

Advances in Radiation Oncology (2022) 000, 100976



www.advancesradonc.org

## **Brief Opinion**

# Access to Radiation Therapy by Syrian Refugees Displaced to Turkey

Nergiz Dagoglu, MD,<sup>a,b</sup>,\* Sule Karaman, MD,<sup>a,b</sup> Banu Atalar, MD,<sup>c</sup> Robert C. Miller, MD, MBA,<sup>d</sup> and Ethem N. Oral, MD<sup>a,b</sup>

<sup>a</sup>Department of Radiation Oncology, Istanbul Faculty of Medicine, Istanbul, Turkey; <sup>b</sup>Department of Radiation Oncology, Istanbul University Oncology Institute, Istanbul, Turkey; <sup>c</sup>Department of Radiation Oncology, Acibadem Mehmet Ali Aydinlar University, Istanbul, Turkey; <sup>d</sup>Emeritus Office, Mayo Clinic, Jacksonville, Florida, USA

Received April 4, 2022; accepted April 14, 2022

#### Abstract

For over 10 years, the Syrian conflict has caused millions of people to leave their homeland, causing one of the biggest refugee crises in modern history. Considering its prevalence, cancer is an important care burden among Syrian refugees. Radiation therapy is one of the essential parts of cancer treatment, and radiation oncology departments must guarantee optimal cancer treatments even in such a challenging setting when patients are displaced forcefully from their homes. National and institutional measures are highlighted in this manuscript to provide suggestions for the delivery of care during refugee crises. There are two issues creating barriers to serving refugee populations: the loss of access to their original care records in Syria for those with a previous diagnosis of cancer referred for continuation of radiation therapy or reirradiation, and the effect of acute radiation therapy toxicity on treatment compliance.

© 2022 The Authors. Published by Elsevier Inc. on behalf of American Society for Radiation Oncology. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

#### Introduction

For over a decade now the Syrian conflict has been going on, causing one of the most devastating refugee crises in recent history. Reports indicate that more than 5 million people have been forced to displace. Turkey hosts the largest number of refugees worldwide, as the number of displaced people reaches a record number. As a neighboring country, Turkey hosts 3.6 million registered Syrian refugees who, currently, constitute the majority of over 4 million refugees and asylum seekers in the country. Turkey is providing them infrastructure,

education, housing, and employment as well as health care services.

In general, from a health perspective, refugee crises are associated with either physical trauma or public health issues like infectious diseases.<sup>3,4</sup> However, it is also a must to target noncommunicable diseases, including cancer care. Interestingly, the reported data from different countries hosting Syrian refugees have shown that the most common cause of death among refugees is not infectious disease, as in previous humanitarian crises, but noncommunicable diseases. It is also reported that before the war, in Syria, cancer was the second leading cause of death, and it became the third leading cause of death after the war.<sup>5</sup> Although the cancer rate among Syrian refugees is not well documented, it is estimated that cancer is a significant contributor to the care burden of this population.

Radiation therapy (RT) is one of the main components of cancer treatment and control. It is suggested that about

Sources of support: This work had no specific funding.

Disclosures: Dr Miller reports a relationship with the American Society for Radiation Oncology that includes employment.

\*Corresponding author: Nergiz Dagoglu, MD; E-mail: ndagoglu@istanbul.edu.tr

https://doi.org/10.1016/j.adro.2022.100976

2452-1094/© 2022 The Authors. Published by Elsevier Inc. on behalf of American Society for Radiation Oncology. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

half of patients with cancer will need RT at least once during their treatment for either local control purposes or palliation. Even in optimal settings, RT might be used suboptimally despite available facilities mainly due to socioeconomic and logistic problems because it generally requires the patients to be in the hospital every weekday with treatment plans that might last more than a month. This is thought to be more of a concern for refugees, who may be forced to move due to military action or financial or administrative reasons. Another aspect is that when applied concurrently with chemotherapy, some side effects may occur with greater intensity, making the patient vulnerable and harming compliance of the patient. It is hard for radiation oncology departments to guarantee optimal treatments in such a challenging atmosphere.

# **Turkey's National Policy**

The health care access of refugees has been viewed as a priority in Turkey.<sup>7</sup> Health services for Syrian refugees started in April 2011. Since then, Turkey has been creating legislative and institutional reforms to build an effective national system in parallel with international standards. In April 2013, the Parliament endorsed Turkey's first asylum law, the Law on Foreigners and International Protection. By this law, registered refugees are provided with free medical care, including cancer treatment, and this constitutes one of the main aspects of Turkey's national asylum system. A directorate general of migration management was established to lead policy-making and proceedings for foreigners living in Turkey. Another regulation adopted was the Temporary Protection Regulation on October 22, 2014, which protects and identifies the rights and obligations along with procedures for those who are granted with temporary protection. Lastly, the Regulation on Temporary Protection granted refugees free access to health services under the General Health Insurance Scheme, which is also the governmental health insurance for Turkish citizens. The Ministry of Health also established mobile cancer screening units for Syrian refugees to overcome diagnosis at advanced stages.2,7

# **Data on Refugees and Cancer Treatment**

To date there are limited data published on cancer among Syrian refugees. Only a few include information on the utilization of RT in this population.<sup>7-9</sup> The results demonstrated that although Syrian refugees have access to free cancer screening and treatment, the majority of patients are diagnosed at an advanced stage. There was a diversity for reported rates of RT access. Sayan et al<sup>9</sup> showed that 3.6% of patients received RT, with a high rate (20.3%) of noncompliance. Several demographic and clinical factors, such as residence in a refugee camp, advanced

stage, and administration of concurrent chemoradiotherapy, were significantly associated with noncompliance. On the other hand, Kutluk et al<sup>7</sup> and Bakkal-Temi et al<sup>8</sup> reported better treatment access of 20% to 39.6%.

## **Institutional Challenges for Access to RT**

At an institutional level, there are 2 main challenges that affect the RT workflow: loss of documentation and patient compliance and toxicity management.

#### Loss of documents

In the setting of a refugee crisis, patients may be referred to an RT department as a newly diagnosed patient or as an on-treatment patient or as a case of reirradiation. Patients often do not have access to their previous treatment details and documents. They have to undergo diagnostic procedures like biopsy or imaging, causing time loss, which adds to patient noncompliance. Reirradiation cases are also difficult to manage. Unfortunately, most of the time, patient statements, which are not very reliable, form the basic information about the previous treatment regarding disease, RT field, and number of fractions (to differentiate between stereotactic body RT and conventional techniques). If the RT need cannot be waived, dose is to be prescirbed with the assumption of the previous RT doses would be highest of the stndard dose trying to apply as low as reasonably achievable normal tissue tolerance doses.

# Radiation therapy compliance and management of toxicity

Radiation therapy compliance is crucial for local control. Considering long and consecutive treatments, the patients should be questioned for transportation options because this is one of the determinant factors in completing timely treatment. Another issue is toxicity. Especially in the setting of chemoradiation, immunosuppression is debilitating. Again, patients should be questioned thoroughly regarding where they live and hygiene standards. To accept them as an inpatient for the duration of their treatment seems to be a better alternative.

#### Conclusion

Managing cancer care with full access to multidisciplinary treatment approaches is a must for refugees and displaced people and should be protected with national and international health strategies.

#### Advances in Radiation Oncology: Month 2022

UNCHR-Turkey. Refugees and asylum seekers in Turkey. Available at: https://www.unhcr.org/tr/en/refugees-and-asylum-seekers-in-tur

Access to radiation therapy by Syrian refugees

key. Accessed March 31, 2022.

Radiation therapy as part of its nature requires personalized approaches considering the dose distribution and normal tissue doses. It gets even more challenging for ontreatment patients and reirradiation settings without documentation. Institutional expertise is crucial to be able to plan for such patients. Also, RT compliance and toxicity management are harder for refugees and displaced people. Appropriate social support may help improve compliance rates if issues relating to language and cultural barriers can be mitigated.

dan and Lebanon between 2015 and 2017. Lancet Oncol. 2020;21: e280-e291.
4. El Saghir NS, Pérez De Celis E, Fares JE, Sullivan R. Cancer care for refugees and displaced population: Middle east conflicts and global

3. Spiegel PB, Cheaib JG, Aziz SA, et al. Cancer in Syrian refugees in Jor-

Treatment plans, treatment compliance, and toxicity management should be closely watched and reported on for future reference. Further collaboration and practical approaches should be shared to provide more unambiguous management for these patients.

- El Saghir NS, Pérez De Celis E, Fares JE, Sullivan R. Cancer care for refugees and displaced population: Middle east conflicts and global natural disasters. *Am Soc Clin Oncol Educ B*. 2018;38:433–440.
   Marzouk M, Kelley M, Fadhil I, et al. If I have a cancer, it is not my
- fault I am a refugee": A qualitative study with expert stakeholders on cancer care management for Syrian refugees in Jordan. *PLoS ONE*. 2019;14:1–19.
- 6. Atun R, Jaffray DA, Barton MB, et al. Expanding global access to radiotherapy. *Lancet Oncol.* 2015;16:1153–1186.
- Kutluk T, Koç M, Öner İ, et al. Cancer among Syrian refugees living in Konya Province, Turkey. Confl Health. 2022;16:3.
- 8. Bakkal Temi Y, Murat Sedef A, Gokcay S, et al. A study on basic demographic and disease characteristics of cancer-diagnosed Syrian refugees treated in the border city of Turkey, Sanliurfa: A hospital-based retrospective case series study. *J BUON*. 2017;22: 1591–1594.
- 9. Sayan M, Eren M, Kötek A, et al. Utilization of radiation therapy and predictors of noncompliance among Syrian refugees with cancer living in Turkey. *BMC Cancer*. 2022;22:532.

#### References

 Liaisons Fine S. labelling and laws: International Organization for Migration bordercratic interventions in Turkey. J Ethn Migr Stud. 2018;44:1743–1755.