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Oncology nursing in the Eastern Mediterranean Region: listening to the workforce

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Background: Over half the countries in the World Health Organization (WHO) Eastern Mediterranean Region (EMR) are experiencing conflict or are socially fragile, compromising cancer care. Nonetheless, throughout the EMR, competent nurses are major players in the cancer care team. The aim of this paper is to portray the challenges and opportunities for oncology nursing in the EMR.

Methods: This paper draws upon the relevant literature on oncology nursing across EMR with a focus on Afghanistan, Lebanon, Somaliland, and Iran. To enhance the scant nursing literature and obtain real-life experiences, short interviews were undertaken with nine nurses and two doctors, personal contacts of the authors, working in cancer care in those countries.

Results: Against the general background of vast economic constraints in health services, the lack of recognition of oncology nursing as a speciality and high rates of nurse migration, many oncology nurses in EMR are fighting for professional recognition and some are working under unsafe conditions. Undeterred by these circumstances, nurses are making every effort to care compassionately for people with cancer.

Conclusions: The perspectives of the cancer workforce in EMR both foster an appreciation of cultural diversity and provide the evidence and motivation for oncology nurses worldwide to further collaborate via global nursing organisations to strive for country-specific recognition and change in nursing practice.

Keywords: Oncology nursing; Eastern Mediterranean Region (EMR); country perspectives; challenges; opportunities

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Introduction

This paper offers a perspective on the current situation of oncology nursing in the World Health Organization (WHO) Eastern Mediterranean Region (EMR) as one part of the series on Oncology Nursing around the Globe.

Given the severe oncology nursing workforce shortage in this region (1), many general nurses who may also be midwives, care for people at risk of or with cancer. The

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objective of this paper is to highlight the challenges and opportunities for those nurses who often lack the training or mentorship in oncology nursing and to document their accounts. Giving voice to these nurses who care for people with cancer, through interview, provides us with real world insight. Four countries in EMR were selected purposively, where nurses' voices are rarely heard—Afghanistan, Lebanon, Somaliland and Iran. Where there was minimal cancer nursing care in Somaliland, two doctors contributed in addition to a generalist nurse.

WHO EMR

The EMR encompasses 21 countries plus the occupied Palestine territory and the unrecognised de facto sovereign state (Republic) of Somaliland, with a total population of nearly 750 million (2). There is huge diversity throughout the region with social, economic and climate challenges impacting on health of the people; however, many share a common language, religion and similar culture. Strikingly, around half the countries in EMR are experiencing conflict or are socially fragile (3,4). Sadly, healthcare facilities are often targeted during conflict (5).

Although countries with a 'very high' human development index (HDI) in EMR (United Arab Emirates, Bahrain, Saudi Arabia, Qatar, Kuwait and Oman) are able to invest in healthcare facilities, progress health outcomes and support neighbouring countries in need, countries with medium or low HDI, including Syria, Yemen, and Sudan, have the highest infant mortality rates in the EMR (6) and indeed, some of the highest in the world (7). Thus, the needs of EMR countries are very different in terms of healthcare, oncology nursing and cancer control.

Highlight box

Key findings

- Perspectives from nurses working in the Eastern Mediterranean Region (EMR) with people with cancer outlined hope and resilience against a background of conflict, geopolitical instability or poverty.
- Many EMR nurses expressed a desire for oncology nursing to become a specialty and for professional recognition from Ministries of Health, and in some countries, from colleagues and citizens.

What is known and what is new?

- The cancer burden is increasing in EMR. There is insufficient nursing workforce, lack of autonomy, exposure to unsafe practices, and lack of systemic anticancer therapies.
- Insights into cancer care in four countries of varied human development levels in the EMR, have hitherto been unheard from nurses.

What is the implication, and what should change now?

- Guided by EMR nurses, the global oncology nursing community will further expedite partnerships and collaboration, to enrich the understanding and practice of all nurses from different cultures, ultimately to improve patient care.

Nursing in East Mediterranean Region

Like most countries, nurses and midwives account for more than half of the health workforce in EMR (1). The East Mediterranean Region accounts for 17% of the global shortage of 5.9 million nurses. It has the second lowest density of nurses among WHO regions, at 15.6 nurses per 10,000 population, within a huge range from less than 1 to 81 nurses per 10,000 population (1). Despite pledges to invest in the nursing workforce and continued policy efforts to strengthen nursing in EMR (8), progress has been slow with one out of six nurses scheduled to retire in the next decade (1). Additionally, many nurses are facing security concerns just going back and forth to their workplace (9). Healthcare workforce migration, including nurses, places more uncertainty upon uncertainty. Specific 'push factors' (i.e., the reasons that people may emigrate from their homes) in the EMR reflect the global evidence on migration, particularly in low and medium human development countries (10); however, corruption, gender discrimination, cultural restrictions and insecurity are additional push factors for EMR health workers (11). Pull factors (i.e., reason to settle in another country) for EMR include promising opportunities in the Gulf Cooperative Council countries. Thus, huge challenges are palpable in the oncology nursing workforce in much of this WHO region.

Cancer in EMR

Cancer is one of the top four leading causes of death in the EMR with over 450,000 people dying from cancer annually; out of all the six WHO regions globally, EMR has the highest estimated increase in cancer burden in the next 15 years (12). This will place great emotional, physical, and financial strain on communities, individuals and their families as well as the healthcare workforce and facilities.

Oncology nursing

There is a paucity of literature on oncology nursing specifically in EMR; this may be due to a lack of opportunity for nurses to publish their work or as a result of few opportunities in education and research to advance oncology nursing. The excellent 'strengthening nursing and midwifery in the EMR: a framework for action 2016–2025' (13) has six strategic directions with priorities, actions and monitoring indicators which applies to all nursing specialities, including oncology. It is heartening to see organisations such as The Global Power of Oncology Nursing (GPON) (14) tackle 'burning' issues at their annual conferences (15) such as oncology nurse migration, oncology nursing in crises zones, climate change, and cancer. These topics were selected by EMR nurses as critical. Dr. Fethiye Gulin Gedik, co-ordinator, Health Workforce in the WHO Regional Office for Eastern Mediterranean (EMRO) affirmed that nurse migration from the region is a huge problem. Nurses from 'low' and 'medium' human development countries are being recruited to replace depleted staff in 'high' and 'very high' human development countries (15,16).

Similar to many low human development countries in the EMR, palliative care nursing is a priority clinical area given the late stage of disease often found at diagnosis. Specialist palliative care services fluctuate from 0.09 per 100,000 people in Lebanon, Saudi Arabia, Qatar, and Kuwait, to no service found in the Occupied Palestinian Territories (17). Thus, palliative care remains underdeveloped and incoordinate in most countries in this region. According to the authors of 'The Atlas of Palliative Care' [2017], there were no nursing schools in the region that taught palliative care as an independent course (18). Tunisia is the only country in the EMR that has developed a national palliative care plan; many other countries include palliative care within their national cancer plans (19). Nevertheless, the consumption of opioid for pain relief in most EMR countries and territories is still inadequate (20). A roadmap for palliative care for EMR is currently being developed (21); a welcome input to the roadmap is the National Comprehensive Cancer Network publication of pain guidelines written specifically for the EMR region (22). However, implementation of guidelines into practice is often a rate-limiting factor.

Four EMR countries selected

Decades of continuous war in Afghanistan has left the country's health systems' infrastructure in a wretched state. Data from over 31,000 households throughout all 34 provinces in Afghanistan, collected 2 years before the Taliban returned to power in August 2021, found that 10,057 (32.1%) people could not access healthcare facilities when needed in the previous three months (23). This large country relies on international donors to support basic cancer services, mostly for people who are able to pay.

Lebanon has the highest number of refugees per capita in the world (24). Moreover, it was hit by the coronavirus disease 2019 (COVID-19) pandemic and the largest non-nuclear explosion that hit its capital, Beirut, on August 4, 2020. Currently, the country is facing one of the world's worst economic and financial crises in the last 150 years. The World Bank reports that gross domestic product (GDP) per capita dropped by 36.5% between 2019 and 2021, and Lebanon was reclassified by the World Bank as a lower-middle income country, down from upper middle-income status in July 2022 (25). The Lebanese lira has declined in value by 90% in the last three years and poverty is soaring affecting the health of the people.

The 10-year 'Somaliland Liberation' war ended in 1991 when Somaliland was declared a small independent Republic in what was previously North Somalia. This 'War of Independence' had a devastating and lasting impact on the healthcare infrastructure; all medical facilities, supplies and healthcare education facilities were completely destroyed. An excellent history of Somaliland and description of the impact of a strong UK:Somaliland healthcare partnership was published in the *Lancet* in 2006 (26); this partnership continues today and is gradually restoring healthcare in Somaliland. Nevertheless, most people in the world are not aware that Somaliland is separate from Somalia. One extraordinary woman, nurse-midwife Edna Adan Ismail, a 'Woman of Firsts' and ex-Minister of Foreign Affairs for Somaliland, provided the thinking and fundraising behind the building of a post-war hospital [Edna Adan University Hospital (EAUH)] and a University taking her name (EAU). Edna, a remarkable nurse, was the Templeton Prize Laureate for 2023, honoring her exemplary achievements to change cultural, religious, and medical norms surrounding women's health in the Horn of Africa, improving the lives of thousands of women and girls in the region and beyond (27).

And lastly, in Iran, officially the Islamic Republic of Iran, revolutions, wars, Western sanctions over the decades and the recent escalation in violence, have negatively impacted upon healthcare in Iran (28). Poverty doubled during 2022 and in Iran, as in much of the world, cost plays a major part in accessing and receiving timely healthcare (29).

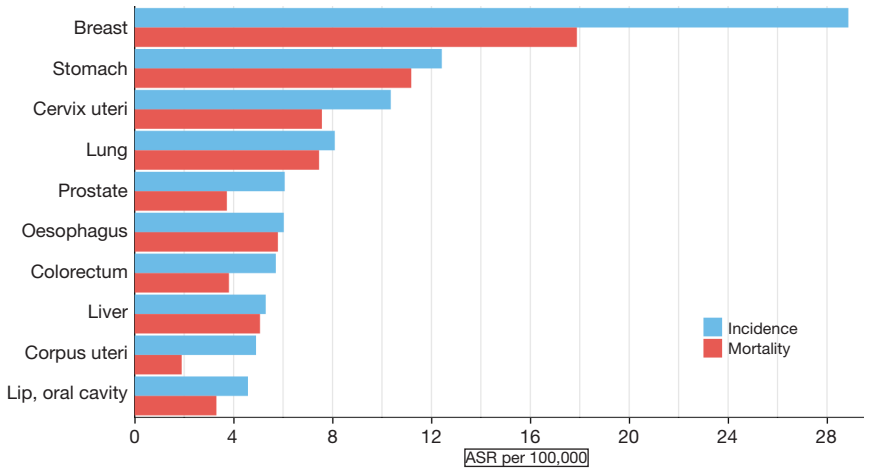

Figure 1 Estimated age-standardized incidence and mortality rates in 2020, Afghanistan, both sexes, all ages (excl. non-melanoma skin cancer) (30). ASR, age-standardized rates.

Methods

The four countries in the EMR of differing human development levels and different challenges for oncology nurses—Afghanistan, Lebanon, Somaliland and Iran—were selected as the focus for this perspective paper primarily because as the senior authors (M.D., A.M.Y.) have personal contacts in these countries through GPON. Each country section described below includes relevant literature on cancer care and oncology nursing relying heavily on the evidence from the WHO EMR Health Observatory in EMRO (2).

Where the relevant literature on oncology nursing was sparse, short interviews were undertaken with nurses (and two doctors in Somaliland) caring for people with cancer in their country. For Afghanistan and Somaliland, the interviews were carried out by Zoom in English by A.M.Y., an experienced mixed methods researcher of over 30 years.

To supplement the literature on oncology nursing in Afghanistan which revealed little, a male cancer nurse, fluent in English, was interviewed; he then used bidirectional translation, English and Afghani to obtain the perspective of the female Afghan oncology nurse who remained anonymous for safety purposes.

There is a dearth of literature on cancer care and oncology nursing in Somaliland, no countrywide cancer registry for cancer data and a paucity of diagnostic and specialised cancer services. Thus one experienced generalist nurse, one senior internal medicine doctor at EAUH, and the first medical oncologist in the country, were interviewed to garner their experiences of caring for people at risk of or with cancer in Somaliland.

For Iran, an experienced psychologist researcher in Iran (S.A.) interviewed two nurses, in Farsi, and then translated the scripts into English.

All quotations were chosen by the senior authors (M.D., A.M.Y.). The accounts below are crafted from the clinicians' experiences and priority needs of oncology nursing in their countries.

Country data (where available) on cancer incidence and mortality (the cancer burden), are illustrated in *Figures 1-3*; healthcare status and the state of oncology nursing in the four countries are summarised for all four countries: Afghanistan, Lebanon, Somaliland and Iran.

Results

Afghanistan

Cancer in Afghanistan

The male nurse noted during interview that there is a lack of availability of specialised oncology facilities for the majority of the people across Afghanistan with one cancer ward within a large general hospital in Kabul. In his opinion, massive challenges remain in the country, in particular for women and girls, with devastating restrictions on autonomy and education. Extensive food insecurity with great economic instability and loss of major sources of global aid, continue. All these factors affect the health of the nation.

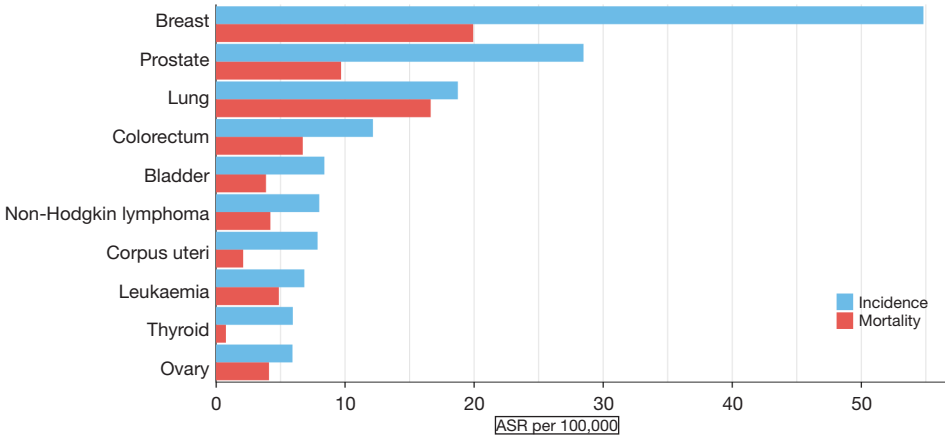

Figure 2 Estimated age-standardized incidence and mortality rates in 2020, Lebanon, both sexes, all ages (excl. non-melanoma skin cancer) (30). ASR, age-standardized rates.

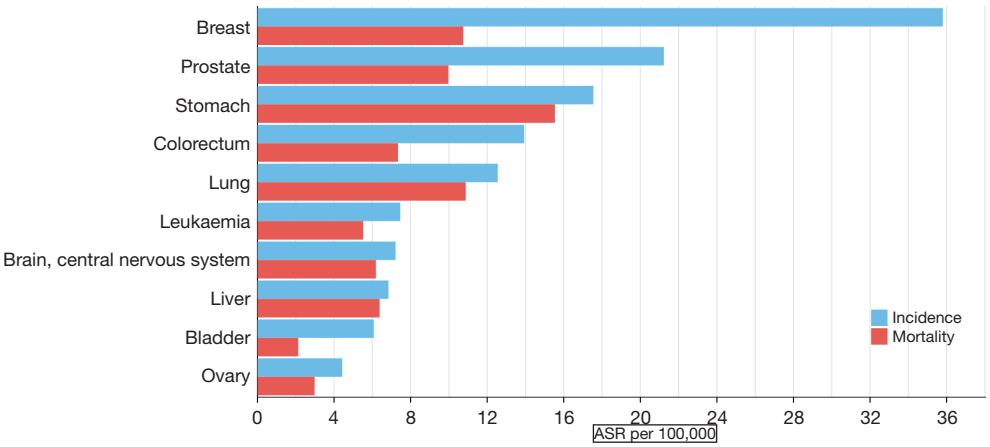

Figure 3 Estimated age-standardized incidence and mortality rates in 2020, Iran (Islamic Republic of), both sexes, all ages (excl. non-melanoma skin cancer) (30). ASR, age-standardized rates.

Speaking about just after the Taliban takeover, two physicians remarked:

"Treatment of cancer gets least priority in a society ridden with unrest and economic instability."—Gautam Das (Institute of Post Graduate Medical Education and Research, Kolkata, India) told the *Lancet Oncology* (31).

My deep concern is about female physicians and nurses. If they are fired, we lose an efficient part of our human resources for caring for patients with cancer and our female staff will lose their hope and ambition for living and serving. The system of treatment will be paralysed….—Musa Joya (Kabul University of Medical Sciences, Kabul, Afghanistan) told the *Lancet Oncology* (31).

For people with cancer from Afghanistan, cross border care in Pakistan (17,32) is common and brings some support to a fractured health system. However, accessing this care is not easy. For those Afghan people with cancer treated at the Shaukat Khanum Memorial Cancer Hospital and Research Centre in Pakistan between 1995 and 2022, more than half have been lost to follow-up and the cancer pathway remains vexing for both patients and providers (32). This situation is reinforced by a public view that there is 'no hope' as outcomes for people with cancer are thought to be dismal (32).

Nonetheless, some recent research has been conducted in-country to describe incidence, distribution, and

important histopathological features of tumours of patients in Afghanistan (33). Breast was the most common malignancy in females and oesophagus was the leading site for primary malignant tumours in males. Wherever the data come from (*Figure 1* illustrates WHO data for Afghanistan), the patient and caregiver cancer pathway for Afghan people remains difficult and often dangerous because of ongoing conflict. The fact that most of the malignancies are diagnosed in the later stages of the disease is attributed to the dearth of specialised oncology institutions and public awareness of cancer in Afghanistan (33). This means that palliative care is all important; nevertheless, it is 'rarely practised' (34).

Nursing in Afghanistan

There are around 20,000 nurses in Afghanistan, with around 5,000 of whom are working for government hospitals and the rest in private organisations (35). The female nurse interviewee noted that many nurses are jobless and, in Afghanistan, there are few opportunities for higher education for nurses. She added that currently, there are no female nurses coming through the nursing educational system, due to the Taliban ban on Afghan girls and women attending university. Domestic violence, with women often imprisoned in their homes, is on the rise with no safehouses any longer (36).

Oncology nursing in Afghanistan

The two brave Afghan nurses interviewed described the current oncology nursing situation (37). Nine nurses cover the whole of the largest and only cancer treatment centre in the country with a capacity of 55 beds for medical oncology patients, and 20 beds for day care services including chemotherapy and blood transfusions.

"*Often there are two patients per bed.*"

"*There is little time to communicate with patients, individually, in particular with the increasing numbers of the rural population, many of whom are illiterate. There is 'no time' for any research.*"

The nurses prepare and administer the chemotherapy; yet, the male nurse stated, "*There is no time to use the safety cabinet for chemotherapy preparation.*"

These nurse leaders tell of their huge anxieties around the lack of safety procedures in preparing chemotherapy with pregnant nurses still having to do so.

With the economic crisis in the country, most patients are unable to afford any medicines. With the crisis of workforce in the cancer hospital, the female nurse explained that the few nurses who are left working, are suffering from anxiety and depression. Unsafe practices are rife. The words of this nurse illustrate the impact of working under these conditions for her colleagues:

"*They get no rest; they have no energy and have aged in the last two years. The smile has been wiped off their faces. On a daily basis, they do not enter a good environment.*"

The male nurse felt that the nurses' demotivation stems from government restrictions, low level salaries and few privileges. Hundreds are leaving the nursing profession. On a daily basis, oncology nurses in Afghanistan are faced with the distress of job insecurity and having to manage a huge economic burden. This is affecting their families and communities as well as the patients.

"*Nurses are feeling demotivated during their long day duties.*"

During the COVID-19 pandemic, cancer care in Kabul was faced with a shortage of drugs and facilities; nurses often took on traditional medical roles and were working 24-hour shifts, handling cytotoxic hazards, and managing patient care. The nurses returned to work every day (at times unpaid) with a 'special enthusiasm', even in these most difficult of conditions and sometimes without fresh water in the hospital. A distinct sense of duty and compassion from the nurses to communicate honestly and listen carefully to their patients, was evident, despite the harrowing circumstances. Nurses had:

"*No time for training or even to help mourning their own relatives.*"

The situation worsened following the COVID pandemic. The nurses spoke of working in the midst of a humanitarian and economic crisis where working conditions in the hospital deteriorated day by day. In this crisis situation, many more nurses and other healthcare professionals continue to leave their professions.

Many healthcare donors in Afghanistan have now withdrawn (38); the nurses are fundraising to be able to provide services free of charge to the poor, in addition to their nursing duties. Despite the devastating circumstances in their country, the two nurse interviewees who care for cancer patients and also have other duties in the general hospital, still expressed a 'high ambition' to serve, assess and care for the neediest patient.

Pre-COVID, senior nurses had been involved in the development of the National Cancer Control Programme (39) and are now asking the global nursing community to support them in reigniting this programme. *Table 1* exemplifies the desperate state of nurse education in general (40-44). The interviewees indicated that they look to the future via international organisations for support and

Table 1 Afghanistan—country data

Topic of interest	Description
Geography	Afghanistan is a landlocked country, at the crossroad of Central and South Asia, sharing its borders with Pakistan, Iran, Uzbekistan, Tajikistan and China
Human development index	Low—0.48 [2021]—189 out of 203 countries and territories (40)
Population	42.2 million (41)
Health system	- Pre-Taliban takeover in August 2021, the previous government had endorsed but not implemented the IPEHS to expand the coverage and scope of health services and move towards universal health coverage (42)
	- After the Taliban takeover, there was temporary pausing of health system funding from the World Bank and other donors, which endangered the progress made
	- To mitigate the collapse of the health system the UN and humanitarian partners provided interim support until the end of June, 2024 to sustain some healthcare delivery (43)
Public system coverage of cancer care	International donors
Cancer treatments available (information from nurse authors)	- Surgery yes
	- Chemotherapy yes—limited
	- Radiotherapy no
	- Targeted molecules (e.g., immunotherapy); no
WHO essential medicines	Not available—many medicines are low quality and often come from other countries
Basic nursing education	Diploma level, offered by both public and private sectors. The ban on education of women does not apply to health services and Afghan women are retraining as nurses and midwives (44)
Oncology nursing education	None—network coverage often poor to participate in global webinars; not in work time

WHO, World Health Organization; IPEHS, Integrated Package of Essential Health Services.

training for nurses in Afghanistan and yet, most nurses want to leave the country. Despite many individual countries making positive position statements of support, it is a long, hard road for nurses to move to high resource countries and then be accepted (45). The 'Global Power of Oncology Nursing' organization highlights the Afghan oncology nurses' dilemma and their amazing work in the most challenging of circumstances, through conferences (46) and via social media. GPON members keep in frequent contact with Afghan nurses via messaging platforms and also lobby for support for the nurses through the UK Parliament; this is acknowledged but no action is taken.

Lebanon

Cancer in Lebanon

On top of the extremely fragile socioeconomic state of the country, Lebanon is registering an increase in cancer cases, mostly due to the advancement in diagnostic procedures and an elderly population (47). According to the WHO Global Cancer Observatory, the number of new cases of cancer in Lebanon has progressively increased over the past decade (48). *Figure 2* shows cancer incidence and mortality rates for Lebanon in 2020. By 2040, a massive surge in the incidence of cancer in Lebanon is estimated with a doubling in the number of cancer cases expected (49). Cancer is increasingly becoming a chronic disease with Lebanese living longer with complex physical and psychological needs that require mainly specialised nursing assistance along the cancer continuum.

Nursing in Lebanon

During the calamitous economic crisis in Lebanon, nurses' salaries have been reduced to a mere pittance, resulting in a mass exodus to Europe, the United States and the Gulf countries. This exodus has put the health care system at risk of breakdown (50).

Rima Sassine Kazan, the President of the Lebanese Order of Nurses 2023, voiced her deep concern about nurse migration and feels Lebanon's nurses have reached breaking point (50):

"*More than 3,500 nurses have left the profession, and more than 55% of those who are still working, primarily the younger generation, hope to leave their jobs and the country within the next 2 years.*"

And yet, despite the challenges and difficulties, there are still nurses who choose to remain in Lebanon including oncology nurses. Professor Myrna Doumit, oncology and palliative care nurse educator and researcher at the American University of Beirut and immediate past President of the Order of Nurses of Lebanon, is one such nurse. She revealed:

"*The health care system in Lebanon is in big danger if the exodus of nurses continues. The nurse: patient ratio is decreasing which might jeopardise the quality of care. Experienced nurses are leaving which leaves hospitals without proper mentors for the novice and junior nurses, especially oncology nurses where experience is highly needed.*"

As Professor Doumit states, the Lebanese health care system has been facing huge problems, especially for the past 3 years, due to financial and political instability, exacerbated by the COVID-19 pandemic and the Beirut explosion; these factors have put substantial stress on all healthcare professionals and organisations. There is minimal financial and psychological support, resulting in health concerns such as anxiety, depression and possibly post-traumatic stress disorder (51).

Oncology nursing in Lebanon

Unfortunately, the steady increase in cancer cases noted above is not accompanied by a proper distribution of specialised nurses across regions or by an increase in the number or expertise of the oncology nursing workforce to meet the population's changing needs. The number of oncology nurses in Lebanon is unknown as this specialty is not well recognised as a stand-alone practice within the field of nursing.

Except in University hospitals, located mainly in the capital, Beirut, where there are dedicated oncology units, oncology care in Lebanon is provided on regular medical units by non-specialist nurses. Nevertheless, in the dedicated oncology units, nurses receive 'on the job' training related to safe handling of medications, different regimens of chemotherapy and side effects. They do also receive face-to-face 'classroom' training on how to deal with oncology patients and how to cope with their own concerns as oncology nurses. Academic programs at the Bachelor of Science in Nursing (BSN) level, prepare novice graduates not fully trained to work as oncology nurses (*Table 2*). In a study by Doumit *et al.* [2017] exploring the personal meaning of work for oncology nurses in Lebanon, the lack of workplace support, poor educational preparation in oncology and the building of interprofessional mutual understanding and respect were highlighted as gaps in professional development (53).

Presently with the country going through this unprecedented economic crash, most chemotherapy drugs are not available [although Italy in particular has provided ongoing support for improving access to life-saving cancer care including chemotherapy among vulnerable population groups (54)]. Health insurance companies have stopped coverage and are asking patients to co-pay, which has put the majority of oncology patients at risk of dying due to lack of accessibility to hospitals and lack of availability of chemotherapy (55). Oncology nurses on the front line feel powerless to help the angry and desperate patients or family members who, hitherto, had become their trusted friends due to the chronicity of the condition.

Oncology nursing has evolved over the years to include physical, psychological, and spiritual care. Two studies exploring palliative care needs from patient (56), nursing and medical (57) perspectives demonstrated a lack of proper preparation and training for nurses. Likewise, in paediatric palliative care in Lebanon, training in communication skills with parents was identified as a need for nurses so that the parents and their children with cancer may integrate and embrace palliative care into the children's care plan (58). Recently a Palliative Care Association was instituted under 'the Order of Nurses' umbrella. It is anticipated this new association will encourage young nurses to pursue higher education in the field of oncology and palliative care.

Somaliland

Cancer in Somaliland

An internal medicine doctor (A.F.A.) explained that cancer literacy amongst the people of Somaliland is poor and if recognised at all, the word 'cancer' is largely associated with 'a death sentence'. Hence public education around cancer is sorely needed. If a family member or friend in a rural community is ill, community social networks will support them to travel to the city of Hargeisa to access healthcare. This doctor recounted that the majority of healthcare professionals prefer to speak to the relatives about a cancer diagnosis and care, rather than to the patient directly. Furthermore, for many female patients to access surgical procedures, they require consent from their spouses or family members. Family members are also heavily involved in bedside care for patients, supporting patients with hygiene and oral care, as there are not sufficient nursing staff to meet patients' needs. Culturally,

Table 2 Lebanon—country data

Topic of interest	Description
Geography	Lebanon borders the Mediterranean Sea, between occupied Palestine and Syria
Human development index	High—0.71 [2021] (40)
Population	5.4 million [2023] (41) excluding approximately 1.5 million refugees from Syria and the Occupied State of Palestine (52)
Health system (information from nurse authors)	- Lebanon's healthcare system is dominated by the private sector, focused largely on hospital and curative care. To counter this, the MOPH has partnered with non-governmental organisations and private entities to expand the network of primary healthcare centers, reaching 245 centers in 2021 - Lebanon is currently facing a complex and multifaceted healthcare crisis. The country has been grappling with a severe financial crisis since 2019, which has been compounded by the social unrest, the devastating Beirut blast in 2020, and the coronavirus pandemic. Additionally, many hospitals in Lebanon are facing significant difficulties following the devaluation of the Lebanese currency, which has made it difficult for them to purchase necessary medical supplies and equipment
Public system coverage of cancer care	Cancer treatment is provided in public and private hospitals and financial coverage is assured through the MOPH and third-party payers. All Lebanese cancer patients have access to treatment through universal cancer drug coverage by the MOPH. This was the case before 2019 but now due to the currency devaluation many drugs are no longer available at the MOPH and many patients are not able to afford treatment
Cancer treatments available	- Surgery - Chemotherapy - Radiotherapy - Targeted molecules (e.g., tyrosine kinase inhibitors, immunotherapy)
WHO essential medicines	WHO essential medicines 2023; pre 2019 all medicines were available; currently shortage exists
Basic nursing education	BSN, MSN and PhD
Oncology nursing education	Oncology nursing education—BSN and MSN + continuing oncology nursing education

WHO, World Health Organization; MOPH, Ministry of Public Health.

families often prefer to care for people at home; admission to hospital is only when their symptoms (e.g., pain, dehydration, and sepsis) exceed the intensity of care that can be delivered by the family in the community.

Until recently, cancer care in Somaliland was limited to surgery. And still, patients who are in need of complex chemotherapy and/or radiation therapy as part of their care, must travel abroad. However, in the last 2 years, private hospitals have started providing chemotherapy services. Needle Hospital in Hargeisa, Somaliland is one such hospital, starting the service in 2022 (59).

Oncology nursing in Somaliland

The majority of nurses in Somaliland are nurse-midwives who focus on the top priority health programme of maternal and neonatal care. Although the Needle Hospital Oncology Unit has recently opened, there is still little publicly-funded cancer treatment with the exception of surgery. One recent strategy was to train 'nurse anaesthetists' to improve surgical safety (60). Oncology nursing is not a nursing specialty in many African countries (61) including Somaliland. Even palliative care in the country was reported as at Level 1 in 2017, 'no known palliative care activity' (62). One improvement was elicited from the Somaliland nurse author (H.k.M.) who stated that in Somaliland, patients in need of palliative care do receive pain management and re-hydration therapy. *Table 3* shows the complete lack of specialization in many areas of nursing including oncology. Basic cancer and palliative care professional training programmes are an absolute necessity in this small state; this may be possible currently by training in Ethiopia.

Amongst the wider community, traditional healers are usually prioritised by individuals when seeking health care. However, one interviewee said, *'It is dangerous to go to healers' because their practices usually contradict mainstream health practices.*

Table 3 Somaliland—country data

Topic of interest	Description
Geography	Somaliland is a de facto sovereign state in the Horn of Africa, with hundreds of miles of coastline on the Gulf of Aden to the North; Somalia to the South
Population	3.5 million (63)
Human development index	Not known; poor is categorised as individuals who earn less than a dollar ($1) per day. 37% of rural and 30% of the urban population are poor (64)
Cancer incidence	Not known
Cancer mortality	Not known
Health system	Is based on an EPHS (65)
Public system coverage of cancer care	Not available
Cancer treatments available	
Surgery	Available
Chemotherapy	Service just started (59)
Radiotherapy	Not available
Targeted molecules	Partially available
Immunotherapy	Not available
WHO essential medicines	Qatar Fund for Development provides life-saving essential medicines to under-served areas in Afghanistan in collaboration with the WHO (66)
Basic nursing education	Available
Oncology nursing education	Not available

WHO, World Health Organization; EPHS, Essential Package of Health Services.

The internal medicine doctor described how the status of cancer care must exist within a culture of Islam. Educating the community about cancer can be 'tricky'. Nonetheless, given the poor standing of cancer care in Somaliland, education on cancer awareness has become central to the general nursing role. It is taboo to discuss reproductive health amongst the Somaliland people, so cervical cancer screening is not widely accepted; however, some maternity nurses have successfully worked with traditional birth attendants to discuss cervical cancer screening. There are community centres, named 'mother and child centres', staffed by nurses who educate women on reproductive health and cervical screening through discussion and leaflets.

All in all, it is challenging to reach rural and nomadic communities. In one project, the nurse from EAUH recounted that a bus was commissioned to provide a cancer screening outreach service but it was not able to travel on 'very rough roads'. In general, the rural community receive a very poor health service. Nevertheless, within the last year at EAUH in Hargeisa, the main city in Somaliland, the doctor noted that a cervical cancer screening programme with cold cauterization of pre-cancerous cervical lesions, has started. Women with advanced lesions suspicious of cervical cancer were previously sent to gynaecologists in-country for further investigation (a biopsy) to assess and decide on treatment from cancer specialists outside the country. Now the cancer care pathways for people, who can afford to pay, are in the process of change with new services from a private hospitals including outpatient chemotherapy at Needle Hospital (Pepsi Branch) (59). Nonetheless, most patients do not have the funds or connections to travel or pay for treatment, and those without the necessary resources remain in the country and may die of their cancer or its complications. Most of the 'oncology' nursing care is symptomatic care such as pain management and blood transfusions.

Iran

Cancer in Iran

The cancer incidence and mortality [2020] shown in

Table 4 Country data—(Islamic Republic of) Iran

Topic of interest	Description
Geography	Iran is a large country in West Asia, bordered by Iraq to the west, Türkiye to the northwest and Azerbaijan, Armenia and Turkmenistan to the north, Afghanistan to the east and Pakistan to the southeast. The Caspian sea is in the north; the Gulf of Oman and the Persian Gulf in the south
Human development index	High 0.774 (40)
Population	89.2 million (74)
Health system	Universal health coverage is enshrined in Iran's constitution
Public system coverage of cancer care	Cancer care is based in the large cities in Iran; international sanctions, flow of medical supplies and ageing equipment is increasingly making optimal cancer care, difficult (75)
Cancer treatments available	- Surgery
	- Chemotherapy
	- Radiotherapy
	- Targeted molecules (e.g., tyrosine kinase inhibitors, immunotherapy)
WHO essential medicines	Yes—in vast majority of country (from author)
Basic nursing education	The evolution in Iran's nursing education has resulted in the establishment of Bachelor, Master, and PhD programs (76)
Oncology nursing education	There are few specific paediatric and adult oncology courses in Iran. Topics e.g., end of life and spirituality are covered in Masters courses. Countrywide oncology nursing competencies are being developed

WHO, World Health Organization.

Figure 3, highlights the need for novel strategic action plans for cancer control programmes across the country. Most people seek treatment in the main cancer centres in Tabriz, Tehran, Isfahan, Mashhad, and Shiraz University of Medical Sciences; many more special centres for cancer early detection and treatment are needed, in particular in rural locations (29). The Imam Khomeini Hospital complex, the largest hospital in Iran, includes a Cancer Institute, affiliated with Tehran University of Medical Sciences; patients are transferred to this Institute from different regions of Iran. Cancer patients may also be treated in general hospitals. The only paediatric cancer specific hospital is MAHAK Hospital and Rehabilitation Centre In Tehran, run by the MAHAK Charity; children are referred here from all regions of Iran and also from neighbouring countries including Afghanistan (67).

Nursing in Iran

In Iran, nurses still strive for recognition from the public (68); however, many nurses today are actively campaigning for respect and equality (69). Hitherto, many Iranian nurses suffered from a poor and a low social status which resulted in frustration, hopelessness and confusion about self-image and social identity (70), often tougher for male nurses (71). Sadly, in 2023, there was still a feeling of lack of respect status of nurses (72).

Nonetheless, progress has been made in the Iranian nursing workforce over the past four decades (73). The academic education system has also flourished and is now a university-supervised system. *Table 4* shows the basic nursing education in Iran is sound; however, oncology nursing specialty courses are in short supply. There is a strict hierarchy in nursing in Iran which may negatively affect patient care (77) and indeed the mental health of clinical nurses who work in direct patient care (78). Managerial posts are perceived as prestigious and there appears to be a theory-practice gap, difficult to fill (79).

Oncology nursing

Much of oncology nurse learning (e.g., chemotherapy safety) must be carried out in nurses' own time (80). Qualitative research by oncology nurses has prospered in the last few years in Iran, focussing on a healthy working environment (81), safety in chemotherapy (82) improving mental health of oncology nurses' perceptions of cancer patients' quality of life (83), support needed for paediatric oncology nurses (84), and the development of oncology nursing competencies (85)—all excellent work. Most studies

cite recommendations that nurses and nurse managers 'should do' and 'have to act upon' (e.g., improving moral distress) (86). The realisation of most recommendations and actions is yet to happen.

Patient-centred care for people with cancer is also challenging in the current context of a paternalistic approach to nursing. Patient-nurse empathetic communication is difficult within a task-oriented approach to care (87,88). Responding to the needs of the individual patient and caregiver will require changing attitudes, values, and behaviours at all levels—patient, professional, and organisational (89,90). Empowering clinical oncology nurses is the optimal approach to establish a therapeutic relationship between nurse and patient (91).

The perspectives of two clinical nurses, who care for cancer patients as one part of their job(s), are outlined below. Author S.A., esteemed researcher, undertook the interviews in Farsi, translated the content into English, and provided a summary of what was shared for the purposes of this paper.

Nurse 1, Maryam, has a Bachelor's degree and currently works in the intensive care units (ICU) of two different hospitals in Tehran and cares for unstable cancer patients, post-operatively. She voiced that most nurses work across more than one hospital and because the salary is low, they need to work extra shifts. There is a high demand for nurses:

"*So there is job security in that sense. It is easier for male nurses to take on more shifts than women, since women traditionally have more family responsibilities in the home.*"

Nurse 2, Akbar, qualified for 14 years, has a Bachelor's degree from Kerman Province and is also currently working in ICU. He previously worked in the men's surgical unit at the Cancer Research Institute in Tehran.

Inequity of access: both nurses were eager to express that unlike the Cancer Research Institute of Tehran Medical Sciences University of which they spoke highly, many specialised oncology units (including women's cancer treatment centres) are within private sector hospitals, denying equality of access as noted above with general healthcare services (92).

Lengthy education: Maryam stated that most nurses have a Bachelor's degree in nursing but those nurses with Masters degrees, specialising in one area of nursing, are few due to limited options. There was a lack of empirical education in nursing and surprisingly, Akbar affirmed that students did not meet any patients before graduating. There is then a mandatory further 2-year training called 'the project' to gain experience with patients in a section (unit). These 2 years largely determine the direction of the nurses' career. According to the nurses, the project years are stressful, and after completion, nurses tend to stick with the 'project' area of practice, rather than start again in another area of nursing.

Nurses can undertake post-graduate courses in paediatrics, mental health and women's health, but presently there are no dedicated adult or paediatric oncology courses. Oncology nursing at some Universities of Medical Sciences may be incorporated into one module of undergraduate nursing. There are also nursing seminars and conferences funded by Cancer Research which both nurses deem useful and knowledgeable for the Iranian participants. However, some clinical nurses may not see any incentive to study at the postgraduate level:

"*Whether the students graduate from an undergraduate or postgraduate course, there is no difference between the tasks they perform on a daily basis.*"

"*Generally, educational opportunities are outside working hours in addition to 'on-the-job' training. Nurses are expected to do 100 hours of relevant education per year with an exam at the end.*"

The general nursing educational pathway lacks specialisation in oncology nursing. This was reinforced by a Faculty of Nursing member from Tehran University of Medical Sciences. He noted that there were no systematic or official procedures to provide qualifications for nurses in Iran; there is only one PhD programme available in the country. This educator explained the reason for the lack post-graduate courses for nurses and no nurse practitioner posts:

"*It is because of the conflict of interest with the medical doctors (at the Ministry of Health and Medical Education) who withstand the realisation of oncology nursing.*"

For the future, Akbar felt it was now essential to have oncology nursing as a speciality due to the increasing burden of cancer in Iran.

"*Most of the cancers we see are on the rise. Gastrointestinal, which used to be affecting only elderly people but nowadays we see that many youngsters are affected, which is surprising.*"

Managing the consequences of cancer and treatment for cancer (i.e., providing supportive care) should be incorporated into the course instead of just learning from books.

Nurses cover a broad range of care needs and have little choice in their specialty covered. There was a feeling of powerless from both nurses:

"*I had no choice but to work in ICU section although I*

preferred to work in emergency unit."

"*It was not up to me to choose my desired section, it is decided by the nursing center in the hospital, wherever they need the new/newcomer nurse*."

According to Akbar and Maryam, nurse burnout is common, and even more so following the COVID-19 pandemic.

"*We are crushed from within witnessing the death of so many people*; *It (death) is never normal for us*."

They highlighted the lack of care paid to nurses. Both nurses stressed the excessive hours worked (double the hours stated) which are not paid:

"*Our nurses look 10–15 years older that what they should look like*."

"*We should work 180 hours a month but we add something from 50 to 175 hours to that amount every month in various shifts (morning, evening, nights)*."

For these nurses, there is no support or interest from managers and from patients or caregivers. Annual leave is allocated, not requested by nurses. The nurses also voiced the 'unlimited' demands from patients' relatives. The nurses understand why caregivers also become frustrated with the shortage of facilities; caregivers often need to sleep in cars or on the pavement to be near their ill relatives. They feel the pressure of payment for the medication for their loved ones, which often they cannot afford. Maryam and Akbar stated that nurses may face physical violence (with no safety procedure or policy in place to support them) because caregivers and patients do not understand how limited the resources are. Astoundingly, nurses were often held responsible by the caregivers for patient outcomes, likely due to the poor communication from the multidisciplinary team to both the caregivers and the patient.

Nurse migration in Iran is high, albeit the data on emigration do not appear to be transparent; Maryam and Akbar estimated that around 4,000–5,000 nurses emigrate annually, securing jobs easily due to a global shortage of nurses, leaving behind a worsening situation for nurses and nurse aids working in Iran. A call to action aimed at the Iranian Government to take immediate measures to compensate for the hospital staff shortage was published in the *Lancet* [2022] (93). A member of the central council of Iran's Nurses' Organization, said that the 'push factor' in Iran was attributed to the nurses' falling income due to devaluation of the national currency (94). The Iranian Government thus far has not paid heed to the increasing emigration problem. Uniting with the global oncology nursing community through adversity may strengthen the case for change.

Discussion

The countries of the EMR profiled in this paper and the perspectives shared by the nurses provide a stark picture of challenge for cancer patients, their family members and the health care providers. Yet all shared a sense of hope and a remarkable image of resilience in a difficult situation. The work for this paper provided a rather unique opportunity for the perspectives from nurses who care for cancer patients in this part of the world to be shared.

The interviews with two oncology nurses in the Kabul hospital, spoke of oncology nursing in a country within the context of poverty, disadvantage, restriction, and malnutrition. This crisis has affected nurses' home lives because of the pressure at work. A safe place to work and a massive shift in healthcare policy to ensure availability of more specialised diagnostic and therapeutic cancer facilities throughout Afghanistan are needed urgently. Yet, this hope is sounding bleak according to the nurses interviewed. The International Council of Nurses (ICN) and the WHO also continue to work through international agencies to support the profession in Afghanistan (95); this global support is much appreciated by the Afghan nurses.

Oncology nursing is a much-needed speciality in Lebanon due to the projected increase in the number of cancer cases across all age groups. Oncology patients require care beyond the physical needs to include psychological and spiritual attention. However, this approach cannot be achieved without trained, professional oncology nurses. Therefore, oncology graduate education is urgently needed to provide quality care. It is heartening to see Lebanese nurses participating in a recent global workforce study on universal palliative care access and alleviation of serious health-related suffering (96). Building networks, collaboration with the global oncology community, supporting personal development and career progression, are very much part of the way forward in oncology nursing in Lebanon.

Somaliland lacks training pathways for specialised nursing roles such as oncology nursing. To compensate for prior lack of basic training in oncology nursing and to realise the ambition to have oncology nursing as a specialty, the Somaliland Ministry of Health and international organisations such as the WHO, The African Organization for Research and Treatment in Cancer (AORTIC) and GPON, are collaborating to develop an oncology nurse training programme. Education and training of nurses as

crucial members of multidisciplinary team in Somaliland, is the golden key to improved publicly-funded cancer care in this poor nation.

Stemming from economic and professional challenges, the COVID-19 pandemic and compounded by the lack of social and political freedoms, Iranian clinical nurses have increasingly been experiencing a tough time. Despite this, oncology nursing research continues to grow, albeit the transfer of the findings into practice is a rate-limiting step. It is enlightening and humbling to hear the insights of nurses providing frontline care. It is anticipated that by future collaboration, the global oncology nursing community can support the Iranian oncology nurses in education and training and by doing so, can incrementally change the public perception of Iranian nurses in particular, around the world.

One common characteristic of all four countries featured is that of nurses wishing to leave their country to work in high development countries. The International Council of Nurses (ICN) states that "imbalances in funding between rich and poor countries means there is an increased risk of unscrupulous international recruitment that fails to adhere to ethical principles and leaves vulnerable health systems stripped of their most valuable asset, qualified nurses" (97). Nurse migration is a complex matter—the 'pull factors' for nurses and their families are many as discussed in the introduction. Senior nurses can make a difference e.g., lobby Ministries of Health to coordinate their activities to increase health resources, support local systems and initiate and implement nursing policies in their countries of origin (98). Author M.D. and role model to many nurses in EMR, did just that, as ex-President of the Order of Nurses in Lebanon (99).

Conclusions

From this overview of 'Oncology Nursing in the Eastern Mediterranean Region: Listening to the Workforce', we witness the inequities experienced by some nurses working in disrupted healthcare systems and their approach to adversity. Nurses from four countries from varied care settings, often dealing with poverty, unsafe practice, conflict, financial crises, gender discrimination and/or political instability, shared their perspectives. Their patriotism was mixed, dependent on societal norms. Broadly, the nursing challenges comprised a shortage of trained nursing workforce often leading to excessive working hours and lack of recognition specialisation of oncology nursing. Educational opportunities in oncology nursing broadly followed the HDI score of the country.

Notwithstanding their struggles, the nurses in EMR caring for people at risk of or with cancer voiced some opportunities to improve patient care and their working lives. All nurses and doctors interviewed were 'shouting out loud' for the strengthening and empowering of the oncology nursing workforce including training in oncology nursing and thus moving towards oncology nursing as a speciality. International support was held in high regard by the nurses interviewed; connecting and networking through organisations, for example ICN, GPON and the International Society of Nurse in Cancer Care (ISNCC), benefits all nurses. These role model authors have contributed to the real-life portrayal of oncology nursing in EMR. The accounts described will motivate global nurses to appreciate other cultures and clinical practices, to learn and to partner with nurses around the globe, ultimately to improve patient care.

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