Quality Assessment of the Current Cancer Control Plan at the Governmental Hospitals in Gaza Strip, Palestine

Basam Mohammad Shaheen ¹, Bothyna Bassyoni ELssyed Etewa ², Abdel Hamid Hassan El Bilbeisi ^{3*}

Received: 24 Feb, 2021, Accepted: 16 May, 2021, Published: 1 Oct, 2021

1. Department of Community Health Nursing, School of Nursing, University of Albutana, the Republic of the Sudan, e-mail: bass.shah@gmail.com
2. Department of Community Health Nursing, School of Nursing, University of Albutana, the Republic of the Sudan, e-mail: B.ELssyedEtewa@gmail.com
3. *(Corresponding Author) Department of Clinical Nutrition, Faculty of Pharmacy, Al Azhar University of Gaza, Gaza Strip, Palestine, e-mail: abed_az@hotmail.com

Abstract

Background: This study was conducted to assess the quality of the current cancer control plan at the governmental hospitals in the Gaza Strip, Palestine.

Methods: This cross-sectional study was conducted at the oncology departments in the three general hospitals in Gaza, among a census sample of Palestinian health care professionals. The WHO-IAEA NCCP Core Self-Assessment Tool was used to assess the quality of the cancer control plan, and an interview-based questionnaire was used to collect additional information on the participant's characteristics. SPSS version 20 was used for the statistical analysis.

Results: A total of 100 participants were included in the present study. The majority, 80% of the study participants, were Nurses, 10% Pharmacists, 6% Oncologists, and 4% Hematologist. The current study participants demonstrated that 96% of the hospitals did not have a written, official, and document plan. All hospitals did not have the most recent written cancer control plan creation, the timeframe (starts) of the project, and the timescale (ends) of the plan; 96% of the hospitals did not have the country intend to develop a new one and the scope of the official cancer control plan; most of the hospitals 97% did not have stakeholders in the planning process; and 97% did not have prevention, early detection, diagnosis and treatment, and palliative care.

Conclusion: The findings provided a comprehensive overview and valuable recommendations to create the national cancer control plan. Particular attention is needed to cover the gaps and limitations that were observed in this evaluation.

Keywords: Cancer control plan, Cancer, Hospitals, Quality assessment

1. Introduction

Cancer is a broad word that refers to a set of illnesses in which aberrant cells develop beyond their normal bounds, causing them to invade other areas of the body and/or spread to other organs. Cancer may affect virtually every area of the body, and it comes in a variety of anatomic and molecular subtypes, each requiring its own set of treatment options (Peppercorn et al., 2008). Cancer is the second leading cause of death globally and is estimated to account for 9.6 million death in 2018 (Ferlay et al. 2018). External factors (tobacco, chemicals, radiation, infectious organisms, and so on) and internal factors (inherited mutations, hormone disorders, immune conditions, and metabolic disorders) contribute to cancer development. These causal factors may act simultaneously or sequentially to initiate or promote carcinogenesis (Anand et al. 2008). According to current research, major risk factors such as avoiding tobacco products, decreasing alcohol use, keeping a healthy body weight, exercising frequently, and addressing infection-related risk factors might prevent between 30 and 50 percent of cancer fatalities (Eyre et al. 2004). In addition, the increasing cancer burden is due to several factors, including population growth and ageing and the changing prevalence of specific causes of cancer linked to social and economic development (Bray et al., 2012). This is especially true in fast-expanding economies, where malignancies linked with poverty and infections give way to cancers associated with more industrialized lives (Bray et al. 2012). Global statistics suggest that Asia will account for almost half of all new cancer cases and more than half of all cancer deaths in 2018, owing to the region's population accounting for roughly 60% of the global population (Bray et al. 2018). In many nations, these locations have a greater prevalence of specific cancer forms associated with a worse prognosis and higher mortality rates and restricted access to prompt detection and treatment (Neal et al. 2015).

The national cancer control plan (NCCP) is a long-term strategic plan to control cancer that is based on the country's cancer burden, cancer risk factor prevalence, and resources available to implement the plan in the context of the country's socio-economic environment and healthcare system (Forman et al. 2018). Furthermore, the idea of comprehensive cancer control is an integrated and coordinated strategy to lowering cancer incidence,

morbidity, and mortality through prevention, early diagnosis, treatment, rehabilitation, and palliative care (Given et al. 2005).

On the other hand, based on the annual report of the Palestinian Ministry of Health (MOH) in the year 2019, the incidence rate of cancer for all populations in the Gaza Strip, Palestine, was (83.9 / 100.000). Moreover, during the period between 2014-2018, there were 8326 new cancer cases in the Gaza Strip, Palestine (MOH, 2019). In Gaza Strip, Palestine, the MOH, as the leading health care provider for cancer management, was working hard and overcrowding conditions to provide at least the minimum duties and requirements to keep cancer care continuously as it could and as it was possible (MOH, 2019). However, the MOH needed information to promote the services provided. This is the first study, which evaluates the current cancer control plan to the best of our knowledge. The current study was conducted to assess the quality of the current cancer control plan at the governmental hospitals in the Gaza Strip, Palestine.

2. Methods and participants

Study Design:

This study utilized the descriptive cross-sectional approach to examine the existing cancer management plan in the Gaza Strip, Palestine.

Study Setting:

This study was conducted in the oncology departments in the three general hospitals in Gaza Strip, Palestine, which provide cancer management for all oncology and hematology patients, includes Al-Shifa Medical Complex, European Gaza Hospital, and Al-Rantisi Hospital (Abo El-Aish ZM, 2020).

Study Participants and Sampling:

The present study included all multidisciplinary team members for cancer management, including (Oncologists, Hematologists, Pharmacists, and Clinical Nurse Specialists), of both genders, who are working in the oncology departments in the three general hospitals

at the Palestinian MOH in Gaza Strip, Palestine. Non-multidisciplinary team members for cancer management at the public hospitals at the Palestinian MOH were excluded from the study. In addition, the study participants were selected using the census sampling method. In Gaza Strip, three hospitals provide cancer management for all oncology and hematology patients, including Al-Shifa Medical Complex, European Gaza Hospital, and Al-Rantisi Hospital (Abo El-Aish ZM, 2020). The total number of multidisciplinary team members for cancer management in these hospitals is 100 (Abo El-Aish ZM, 2020).

Study Instrumentaion:

A questionnaire was used to collect the following data from each participant (All multidisciplinary committee team members for cancer management): The WHO-IAEA NCCP Core Self-Assessment Tool (Rouhollahi et al. 2014) was used to assess the quality of the current cancer control plan in the Gaza Strip, Palestine. Additionally, data about the socio-demographic and characteristics of the participants were obtained using an interview-based questionnaire.

Data Collection:

Before the data collection process, a pilot study was carried out on fifteen participants to enable the researcher to examine the tools of the study in terms of acceptability, applicability and time frame. The data were collected by five qualified data collectors (Five nurses) who were given explanations and training by the researcher about the study, its purpose, objectives, procedures and how to distribute and collect the questionnaires. The questionnaire and data collecting procedure were altered as a result of the pilot study's findings.

Data Analysis:

Statistical analysis was performed using SPSS version 20. Significant tests were used, including mean, standard deviation (SD), frequency, percentage, chi-square test, with Fisher's exact test was used to assess the difference among participants in the three hospitals. A P-value of < 0.05 was considered statistically significant.

Ethical Approval:

The study protocol was approved by the Ethics Committee of Albutana university and the Palestinian Health Research Council (Helsinki Ethical Committee of Research PHRC/HC/785/20). In addition, the study participants and other parties were given signed informed consent.

3. Results:

This study was conducted in the oncology departments in the three leading general hospitals at the Palestinian MOH in Gaza Strip, Palestine, which provide cancer management for all oncology and hematology patients, including Al-Shifa Medical Complex, European Gaza Hospital, and Al-Rantisi Hospital. Table 1 shows the main characteristics of the study participants by hospitals. A total of 100 participants were included in the present study (59% of the study participants were females, and 41% were males.). The present study findings revealed that the mean age (years) for the study participants was 40.38 ± 10.08 . In addition, the majority, 80% of the study participants, were nurses, 10%, 6%, and 4% were pharmacists, oncologists, and Hematologist. About 5% of the participants have a PhD, 11% had a master, most of the participants, 74% had a bachelor degree, and only 10% had a diploma. The majority, 85% of the participants, did not have special studies in cancer care. Furthermore, 59% of the participants did not have training courses in cancer care. Regarding the total experience work (years), the present study results revealed that the mean of entire experience work was 14.67 ± 8.91 , and the mean of experience years in the current work was 7.83 ± 6.17 . The mean of work's years after specialized studies were 3.16 ± 5.97 . Moreover, the findings of the presents study demonstrated that the mean training duration (weeks) was 39.63 ± 80.38 . Furthermore, no statistically significant variations in the characteristics of research participants among hospitals were discovered ($P\text{-value} > 0.05$).

Table 1. Characteristics of the Study Participants by Hospitals

Variables	Al-Shifa Medical Complex		European Gaza Hospital		Al-Rantisi Hospital		Total		P-Value
	No.	%	No.	%	No.	%	No.	%	
Age (Mean±SD) (40.38±10.08)									
30 years and less	2	4.8%	11	26.2%	29	69%	42	42%	0.268
31-45 years	6	15.8%	11	28.9%	21	55.3%	38	38%	
45 years and more	3	15%	8	40%	9	45%	20	20%	
Gender									
Males	7	11.9%	20	33.9%	32	54.2%	59	59%	0.503
Females	4	8.9%	10	24.4%	27	65.9%	41	41%	
Job									
Oncologist	0	0%	3	50%	3	50%	6	6%	0.539
Hematologist	0	0%	2	50%	2	50%	4	4%	
Nurse	9	11.2%	21	62.5%	50	26.2%	80	80%	
Pharmacist	2	20%	4	40%	4	40%	10	10%	
Qualification									
Diploma	1	10%	6	30%	3	60%	10	10%	0.076
Bachelor	8	10.8%	17	23%	49	66.2%	74	74%	
Master	2	16.7%	3	33.3%	6	50%	11	11%	
Ph.D.	0	0%	4	25%	1	75%	5	5%	
Special studies in cancer care									
Yes	0	0%	6	40%	9	60%	15	15%	8.289
No	11	12.9%	24	28.2%	50	58.8%	85	85%	
Training courses in cancer care									
Yes	3	7.3%	12	29.3%	26	63.4%	41	41%	0.636
No	8	13.6%	18	30.5%	33	55.9%	59	59%	
Total-experience work years (Mean±SD) (14.67±8.91)									
10 years and less	3	7.7%	11	28.2%	25	64.1%	39	39%	0.600
11-20 years	4	10.5%	14	36.8%	20	52.6%	38	38%	
20 years and more	4	17.4%	5	21.7%	14	60.9%	23	23%	
Experience years in the current work (Mean±SD) (7.83±6.17)									
5 years and less	4	9.8%	12	29.2%	25	61%	41	41%	0.766
6-15 years	7	14.9%	14	29.8%	26	55.3%	47	47%	
15 years and more	0	0%	4	33.3%	8	66.7%	12	12%	
Work's years after specialized studies (Mean±SD) (3.16±5.97)									
No work years	11	13%	24	28.2%	50	58.8%	85	85%	0.204
1-10 years	0	0%	6	54.5%	5	45.5%	11	11%	
10 years and more	0	0%	0	100%	4	0%	4	4%	
Training duration (weeks) (Mean±SD) (39.63±80.38)									
No training duration	8	13.6%	18	30.5%	33	55.9%	59	59%	0.875
1-10 weeks	2	8.3%	8	33.3%	14	58.4%	24	24%	
10 weeks and more	1	5.9%	4	23.5%	12	70.6%	17	17%	

Statistical testing using Fisher's exact test. Data are expressed as a percentage for different categorical variables. P-value less than .05 was considered statistically significant.

In addition, Figure 1. shows the plan existence related to cancer control plans by hospitals. The present study participants demonstrated that 96% of the hospitals did not have a written, official, and document plan, and only 4% of the hospitals had a written, authorized, and document plan.

Figure (1) The plan existence related to cancer control plan by hospitals

Furthermore, figure 2. shows the plan timeliness related to cancer control plans by hospitals. The present study participants demonstrated that all hospitals did not have the most recent written cancer control plan creation, the timeframe (starts) of the plan, and the timescale (ends) of the plan. In addition, the majority, 96% of the hospitals did not have the country intend to develop a new one and the scope of the official cancer control plan; and just 4% of the hospitals had the government intend to establish a new one and the scope of the official cancer control plan.

Figure (2) The plan timeliness related to cancer control plan by hospitals

Furthermore, Figure 3. shows the stakeholders involvement related to cancer control plans by hospitals. The participants of the present study show that most of the hospitals, 97% did not had stakeholders in the planning process represent a balance among sectors, representative experts in the planning process and representative's leaders; and only 3% of the hospitals had stakeholders in the planning process represent a balance among sectors, representative experts in the planning process and representative leaders.

Figure (3) The stakeholders' involvement related to cancer control plan by hospitals

Moreover, Figure 4. shows the plan comprehensiveness (cancer prevention and control continuum) related to cancer control plans by hospitals. The present study participants agree that in most hospitals, 97% did not have prevention, early detection, diagnosis and treatment, and palliative care, and only 3% of the hospitals had prevention, early detection, diagnosis and treatment, and palliative care.

Figure (4) The plan comprehensiveness related to cancer control plan by hospitals

Additionally, Figure 5. shows the critical sections of the plan (cancer prevention and control continuum) related to the cancer control plan by hospitals. The participants of the present study agree that the most of the hospitals, 97% did not have an assessment of the cancer problem and cancer risk factors, evaluation of the cancer control performance, goals and measurable short, medium and long-term objectives, and plan of action to meet the objectives based on evidence, affordability, and equity. Only 3% of hospitals evaluated the cancer issue and risk factors, as well as the performance of cancer control, goals and quantifiable short, medium, and long-term targets, and a plan of action based on evidence, affordability, and equality.

Figure (5) The critical sections of the plan related to cancer control plan by hospitals

Further, Figure 6. shows the rest of the critical sections of the plan (cancer prevention and control continuum) related to the cancer control plan by hospitals. Most hospitals, according to the participants in this study, did not have integration of activities with existing chronic disease and other related programs, priority research areas to support the implementation of the plan, development of an information system for monitoring and evaluating the priorities, transparent process and outcome indicators for monitoring and evaluation, and transparent process and outcome indicators for monitoring and evaluation.

Figure (6) The critical sections of the plan related to cancer control plan by hospitals

4. Discussion

Cancer care in Palestine faces many challenges in providing its services, mainly due to the presence of economic crisis, shortage of resources, insufficient data, information and political instability (Aboumsallem et al. 2020). This study was conducted in the oncology departments in the leading general hospitals in the Gaza Strip, Palestine, to evaluate the quality of the current cancer control plan. To achieve the purpose of the present study, a total of 100 participants were included in the present study. Despite extensive years of overall work experience, the bulk of the participants, 85 percent, did not have specific studies in cancer care. According to one of the study's preliminary results, around 59 percent did not have training courses in cancer care. The present study results suggested the urgent need for a training program and special studies with long duration, which focuses on cancer care. Moreover, the findings of the presents study demonstrated that no statistically significant differences were found between the characteristics of the study participants by the included hospitals.

Regarding the current cancer control plan, the present study participants demonstrated that 96% of the hospitals did not have a written, official, and document plan. Only 4% of the hospitals had a written, authorized, and document plan. In addition, all hospitals did not have the most recent written cancer control plan creation, the timeframe (starts) of the plan, and the timescale (ends). Furthermore, the majority 96% of the hospitals did not have the country intend to develop a new one and the scope of the official cancer control plan; and just 4% of the hospitals had the government intend to build a new one and the scope of the official cancer control plan. There is not a country on the planet where cancer does not exist. Cancer control activities are carried out even in low-resource countries. As a result, effective cancer control programs are required worldwide. The following are some of the reasons for starting a cancer control planning process or revising a current program: there is no previously stated cancer control strategy in the country or area, and it is acknowledged that cancer cases or cancer risk factors are a substantial or growing problem that requires systematic, coordinated action. (Sager TØ, 2012). The present study results support the urgent need to develop a written cancer control plan because there is no previously written cancer control plan in Gaza Strip, Palestine.

Moreover, the participants of the present study show that most of the hospitals 97% did not have stakeholders in the planning process represent a balance among sectors,

representative's experts in the planning process and representative's leaders; and only 3% of the hospitals had stakeholders in the planning process represent a balance among sectors, representative's experts in the planning process and representative's leaders. In the context of cancer control planning, a stakeholder has the potential to invest in the planning process (Pearlman et al. 2016). Suppose a cancer control plan is comprehensive and assuming there is a genuine intention to implement it. In that case, all the critical current and potential stakeholders should be invited, early on, to participate in the planning process. Stakeholders are more likely to acquire a sense of ownership of the plan and a commitment to seeing it through if they are involved early on. (Goss et al. 2013). Participants in the planning process need to interact and communicate freely. Attributes essential for collaborative work include flexibility, open-mindedness, tolerance, acceptance of changes in authority and status, and willingness to face a challenge (Fantini AE, 2007). In addition, the participants of the present study agree that in most of the hospitals, 97% did not have prevention, early detection, diagnosis and treatment, and palliative care; and only 3% of the hospitals had prevention, early detection, diagnosis and treatment, and palliative care. Cancer control seeks to reduce the incidence, morbidity, and mortality of cancer and enhance the quality of life of cancer patients in a specified population by systematically implementing evidence-based interventions for prevention, early detection, diagnosis, treatment, and palliative care (Di Cesare et al. 2013). The components of cancer control should include 1. In resource-strapped countries like Palestine, a plan is more likely to be implemented if it has fewer but longer-lasting interventions based on evidence-based priorities, ranging from prevention to end-of-life care, with the measurable process and outcome objectives that can be monitored and evaluated if basic information systems are in place (Vineis et al. 2014). 2. Early detection detects (or diagnoses) the disease at an early stage when it has a high potential for cure (Lingen et al. 2008). 3. Treatment aims to cure disease, prolong life, and improve the quality of remaining life after the appropriate available procedures confirm the cancer diagnosis. Early detection programs and evidence-based standards of care are connected to the most effective and efficient therapy (McGoon et al. 2004). Patients with malignancies like acute leukemia and lymphoma, which are highly sensitive to treatment despite being widely distributed, might benefit from a cure or a longer life. This component also covers rehabilitation to help individuals with cancer-related disabilities improve their quality of life (NRC, 2003). 4. Palliative care serves the

requirements of all patients who require symptom alleviation, as well as psychosocial and supportive care, especially those in late stages of disease who have a slim prospect of being cured or who are nearing the end of their lives. (Kristjanson et al. 2004).

Additionally, the participants of the present study agree that most of the hospitals 97% did not have an assessment of the cancer problem and cancer risk factors, evaluation of the cancer control performance, goals and measurable short, medium and long-term objectives, and plan of action to meet the objectives based on evidence, affordability, and equity; and only 3% of the hospitals had an assessment of the cancer problem and cancer risk factors, evaluation of the cancer control performance, goals and measurable short, medium and long-term objectives, plan of action to meet the objectives based on evidence, affordability, and equity. Even though cancer is a worldwide public health concern, many countries have not included cancer control in their health agendas. Low-income and disadvantaged people are more likely to be exposed to cancer-causing substances such as carcinogens in the environment, cigarette use, alcohol misuse, and infectious diseases. These populations have less political clout, fewer access to health care, and a lack of education that would enable them to make health-related decisions (Petersen P, 2009).

Furthermore, the participants in this study agree that the majority of hospitals (97 percent) lack integration of activities with existing chronic disease and other related programs, priority research areas to support the implementation of the plan, development of an information system for monitoring and evaluating the priorities, transparent process and outcome indicators for monitoring and assessing the importance, and transparent process and outcome indicators for monitoring and evaluating the priorities. Prioritization is critical since existing resources will never be sufficient to fulfill all health demands. A cancer control strategy may initially be restricted to prevention and palliation in low- and middle-income nations. Only a competent primary healthcare system and enough pathologists and surgeons to follow up on identified cases allow for population-wide cancer early detection (Gelband et al. 2007). Finally, because there is no previously documented cancer control plan in Gaza Strip, Palestine, the findings of this study suggest the urgent necessity to establish a written cancer control strategy.

Furthermore, creating and executing an efficient cancer control strategy requires a broad participatory approach that engages essential stakeholders from the start. In resource-strapped countries like Palestine, a plan is more likely to be implemented if it includes

fewer but longer-lasting interventions based on evidence-based priorities, ranging from prevention to end-of-life care, with the measurable process and outcome objectives that can be monitored and evaluated if basic information systems are in place (Bhalla A, 2018). The main limitation of this study is its cross-sectional design. The main strength of this study is the first study, which assessed the quality of the current cancer control plan at the governmental hospitals in the Gaza Strip, Palestine.

5. Conclusion

The findings offered a thorough overview as well as valuable recommendations for establishing the NCCP. Covering the gaps and limitations identified in this study requires extraordinary effort. Furthermore, the most attractive step appears to be forming a robust national cancer control advisory council with the participation of many stakeholders and principal actors. This committee may ensure proper planning, decision-making, and implementation of the NCCP in the Gaza Strip, Palestine in the medium and long term.

References

- Abo El-Aish, Z. M. (2020). Knowledge, Attitude and Practice Assessment of Pediatric Radiation Protection Guidelines amongst Radiographers and Radiologists at Governmental Hospitals in the Gaza Strip (Doctoral dissertation).
- Aboumsallem, J. P., Moslehi, J., & de Boer, R. A. (2020). Reverse cardio-oncology: cancer development in patients with cardiovascular disease. *Journal of the American Heart Association*, 9(2), e013754.
- Anand, P., Kunnumakara, A. B., Sundaram, C., Harikumar, K. B., Tharakan, S. T., Lai, O. S., ... & Aggarwal, B. B. (2008). Cancer is a preventable disease that requires significant lifestyle changes. *Pharmaceutical Research*, 25(9), 2097-2116.
- Bhalla, A. (2018). Strategies and Intervention for Cancer Screening at Village Level.
- Bray, F., Ferlay, J., Soerjomataram, I., Siegel, R. L., Torre, L. A., & Jemal, A. (2018). Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA: a cancer journal for clinicians*, 68(6), 394-424.
- Bray, F., Jemal, A., Grey, N., Ferlay, J., & Forman, D. (2012). Global cancer transitions according to the Human Development Index (2008–2030): a population-based study. *The lancet oncology*, 13(8), 790-801.
- Di Cesare, M., Khang, Y. H., Asaria, P., Blakely, T., Cowan, M. J., Farzadfar, F., ... & Lancet NCD Action Group. (2013). Inequalities in non-communicable diseases and effective responses. *The Lancet*, 381(9866), 585-597.
- Eyre, H., Kahn, R., Robertson, R. M., ACS/ADA/AHA Collaborative Writing Committee, ACS/ADA/AHA Collaborative Writing Committee Members, Clark, N. G., ... & Thun, M. J. (2004). Preventing cancer, cardiovascular disease, and diabetes: a common agenda for the American Cancer Society, the American Diabetes Association, and the American Heart Association. *Circulation*, 109(25), 3244-3255.
- Fantini, A. E. (2007). Exploring and assessing intercultural competence. Available at: https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=1815&context=csd_research . Accessed on: January 2021.

- Forman, D., Bauld, L., Bonanni, B., Brenner, H., Brown, K., Dillner, J., ... & Wild, C. P. (2018). Time for a European initiative for research to prevent cancer: a manifesto for Cancer Prevention Europe (CPE). *Journal of cancer policy*, 17, 15-23.
- Gelband, H., & Sloan, F. A. (Eds.). (2007). *Cancer control opportunities in low-and middle-income countries*.
- Given, L. S., Black, B., Lowry, G., Huang, P., & Kerner, J. F. (2005). Collaborating to conquer cancer: a comprehensive approach to cancer control. *Cancer Causes & Control*, 16(1), 3-14.
- Goss, P. E., Lee, B. L., Badovinac-Crnjevic, T., Strasser-Weippl, K., Chavarri-Guerra, Y., St Louis, J., ... & Azenha, G. (2013). Planning cancer control in Latin America and the Caribbean. *The Lancet Oncology*, 14(5), 391-436.
- Kristjanson, L. J., & Aoun, S. (2004). Palliative care for families: remembering the hidden patients. *The Canadian Journal of Psychiatry*, 49(6), 359-365.
- Lingen, M. W., Kalmar, J. R., Karrison, T., & Speight, P. M. (2008). Critical evaluation of diagnostic aids for the detection of oral cancer. *Oral oncology*, 44(1), 10-22.
- McGoon, M., Gutterman, D., Steen, V., Barst, R., McCrory, D. C., Fortin, T. A., & Loyd, J. E. (2004). Screening, early detection, and diagnosis of pulmonary arterial hypertension: ACCP evidence-based clinical practice guidelines. *Chest*, 126(1), 14S-34S.
- National Research Council. (2003). *Childhood cancer survivorship: improving care and quality of life*.
- Neal, R. D., Tharmanathan, P., France, B., Din, N. U., Cotton, S., Fallon-Ferguson, J., & Emery, J. (2015). Is increased time to diagnosis and treatment in symptomatic cancer associated with poorer outcomes? Systematic review. *British journal of cancer*, 112(1), S92-S107.
- Palestinian Ministry of Health, Annual report (2019). Accessed on January 2021. Available at: <http://www.moh.gov.ps/portal/wp-content/uploads/2020/06/MOH-Annual-Report-2019.pdf>.
- Pearlman, P. C., Vinson, C., Singh, T., Stevens, L. M., & Kostecky, B. (2016). Multi-stakeholder partnerships: breaking down barriers to effective cancer control planning and implementation in low-and middle-income countries. *Sci Dipl*, 5, 1-15.

- Peppercorn, J., Perou, C. M., & Carey, L. A. (2008). Molecular subtypes in breast cancer evaluation and management: divide and conquer. *Cancer Investigation*, 26(1), 1-10.
- Petersen, P. E. (2009). Oral cancer prevention and control—the approach of the World Health Organization. *Oral oncology*, 45(4-5), 454-460.
- Rouhollahi, M. R., Mohagheghi, M. A., Mohammadrezai, N., Ghiasvand, R., GHANBARI, M. A., Harirchi, I., & Zendehdel, K. (2014). Situation analysis of the national comprehensive cancer control program (2013) in their of Iran, assessment and recommendations based on the IAEA impact mission.
- Sager, T. Ø. (2012). *Reviving critical planning theory: Dealing with pressure, neo-liberalism, and responsibility in communicative planning*. Routledge.
- Vineis, P., & Wild, C. P. (2014). Global cancer patterns: causes and prevention. *The Lancet*, 383(9916), 549-557.