Enhancing Clinical Decision-Making in LATAM Through Virtual Genitourinary Tumor Boards

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Abstract

Inequity in cancer care access among LATAM countries is huge. Experience with gastrointestinal tumors in Latin America has shown care disparities can be reduced by equalizing access to high-quality medical knowledge in a context of a multidisciplinary environment for medical discussions.

Here, we describe our experience of working with virtual genitourinary multidisciplinary tumor boards (vGUMDT), including how the virtual board has helped with clinical decision-making.

We describe vGUMDT´s experience and the importance of basing clinical decision-making in the consultant's own center, reducing the need for referrals.

In total, 345 cases were presented. The majority were prostate cancer cases, and the median age of patients was 64 years. Five participating centers were in Buenos Aires, 7 were in other cities in Argentina (Neuquén, Mendoza, Formosa, Salta, Santa Fé, Entre Ríos, Córdoba), and 3 centers were located in other countries in South America (Perú, Colombia, and Paraguay). Median distance from treating center to vGUMDT headquarters was 1289.8 km. A few patients (n = 60, 17.3%) were referred to the Alexander Fleming Cancer Institute or tertiary health care centers for surgery or systemic therapy, and a minority of cases were referred for radiotherapy. Multidisciplinary virtual experiences, such as vGUMDT, should be carefully addressed by health care decision-makers, given their popularity and their demonstrated cost-effectiveness.

Introduction

In the realm of cancer care, multidisciplinary tumor boards play a vital role in facilitating comprehensive and holistic treatment decision-making processes. These tumor boards bring together health care professionals from various disciplines, such as medical oncology, surgical oncology, radiation oncology, pathology, and radiology to collectively review patient cases and develop optimal treatment plans. The collaborative nature of these tumor boards ensures that patients receive well-rounded, evidence-based care that considers multiple perspectives. The ongoing, groundbreaking changes in cancer care are intended to provide highly personalized therapeutic approaches based on a meticulous assessment of individual patient characteristics such as age, sex, and ethnicity, as well as disease characteristics such as clinical presentation, genomic information, and other phenotypic data[1]. Several recent developments have greatly increased the volume of available information that can be used to guide cancer care, such as comprehensive genomic profiling, molecular classifications, new images, and real-world evidence (RWE).

Key Words

Tumor boards, multidisciplinary team, virtual meeting, genitourinary cancer

Competing Interests

None declared.

Article Information

Received on March 19, 2023
Accepted on June 18, 2023
This article has been peer reviewed.

Soc Int Urol J. 2023;4(6):454–457
DOI: 10.48083/PLQH7724

Regarding RWE, this can be generated from data collected outside traditional clinical trials from sources such as patient registries[2]. In 2019, the United States Food and Drug Administration (FDA) published draft guidance for industry partners wishing to incorporate RWE as part of their regulatory submission package[3]. The following year, the European Medicines Agency acknowledged the necessity of using RWE methodologies in cases where traditional randomized clinical trials were either unfeasible or unethical, and discussed how these RWE methodologies could be validated for use in clinical decision-making[2].

The ever-increasing amount of information provided by using these new technologies, as well as the interaction of each of these aspects with each other, complicates clinical decision-making in oncology and has led to a requirement for multidisciplinary teams that are able to collate the information to help guide clinical decisions. This can take the form of multidisciplinary tumor boards (MDT), which assess combinations of molecular information, imaging data, pathological data, patient characteristics and information, and available treatment options and corresponding evidence levels to guide the best options for personalized cancer care.

MDT have traditionally been conducted in person. However, this poses several issues that may affect the ability to implement an MDT, including (a) experts may have limited time available for a meeting; (b) small cancer centers or individual health care professionals may not have access to experts; (c) social distancing measures/ travel restrictions due to the COVID-19 pandemic may prevent meetings from taking place; (d) long distances from the treating facility to academic's centers, especially in our country or region.

Virtual MDTs (vMDTs) that allow meetings to take place remotely (or that use computational systems to facilitate asynchronous feedback from medical and scientific experts)[4] can provide improved access to specialist knowledge and inform clinical decision-making.

While the concept of multidisciplinary tumor boards has gained traction in many high-income countries, there remains a significant lack of global perspective in their implementation. However, it is worth noting that efforts have been made to bridge this gap through collaborations between high-income countries and low- and middle-income countries (LMICs). These collaborations have facilitated the establishment of virtual tumor boards, where experts from different parts of the world come together to discuss complex cases and share knowledge[5].

In Africa and Asia, the implementation of virtual tumor boards has proven to be particularly beneficial for fostering multidisciplinary care. By leveraging technology and telecommunication platforms, health care professionals from these regions can connect with experts globally and gain valuable insights into the management of various types of tumors. This cross-cultural collaboration has not only enhanced clinical decision-making but also encouraged knowledge exchange, capacity building, and skill development among health care professionals in LMICs[6,7].

However, while progress has been made in bridging the global gap in tumor board implementation, certain regions still face challenges. In particular, Latin America (LATAM) lacks a comprehensive background of the current status of multidisciplinary tumor boards and their integration into cancer care systems. The implementation of tumor boards, especially those focusing on genitourinary (GU) cancers, has been relatively delayed compared to other neoplasms such as breast cancer[8]. This gap can be attributed to a variety of factors, including resource constraints, limited access to advanced technologies, and variations in health care infrastructure across LATAM countries.

Understanding the current status and challenges faced by multidisciplinary tumor boards in LATAM, especially in the context of GU cancers, is crucial for improving patient outcomes and narrowing the gap in comprehensive cancer care. By exploring and addressing these issues, health care systems in LATAM can benefit from the experiences of other regions and adapt successful strategies to optimize their own multidisciplinary tumor board practices. Inequity in cancer care access among LATAM countries is substantial[9]. Experience in Latin America has shown that equalizing access to high-quality medical knowledge in a context of a multidisciplinary environment for medical discussions has reduced disparities in care for patients with gastrointestinal tumors[10].

Here, we describe our experience of working with virtual genitoUrinary multidisciplinary tumor boards (vGUMDT), including how the virtual board has helped them with clinical decision-making.

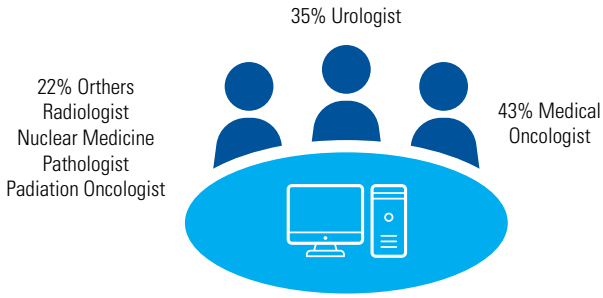
Methods and Materials

The Instituto Alexander Fleming´s vGUMDT was launched in December 2019, and initially 10 sessions were planned. Since the covid 19 pandemic lockdown, we have transformed our institutional GU tumor board into a virtual modality and since March 2020, we have had weekly meetings. We have been included in the Project Extension for Community Healthcare Outcomes (ECHO) [11] as a GU hub in Argentina.

The vGUMDT involves oncologists, urologists, pathologists, radiologists, nuclear medicine radiologists, radiation oncologists, clinical trial investigators, and oncology and urology fellows (**Figure 1**). In each interactive session, cases are referred from different parts of Argentina and

FIGURE 1.

vGUMDT composition



neighbouring countries (Paraguay, Perú, Colombia). To facilitate the participation of other countries in vGUMDT, a collaborative approach has been adopted, with health care professionals from various regions invited (by email) to share their cases and contribute to the discussions.

The treating physician presents the case as a clinical challenge that participants are invited to solve. All information has been de-identified in accordance with the requirements of local ethics committee. Patient information required for presentation includes primary tumor type, stage at diagnosis, previous lines of treatment, performance status, histological features, and molecular and/or immune-histochemical biomarkers. This is followed by a discussion of all the members of vGUMDT. The vGUMDT recommendations was sent to each physician individually. The final choice of therapy remains with the treating physicians.

Cases characteristics

Cases characteristics are shown in Table 1. Median patient age was 64 years (IQR 35); 91% were male and 9% female. Five participating centers were in Buenos Aires, 7 in cities in Argentina (Neuquén, Mendoza, Formosa, Salta, Santa Fé, Entre Ríos, Córdoba), 3 in other South America countries (Perú, Colombia and Paraguay). Median distance from treating center to vGUMDT bunker was 1289.8 km (range 6 to 6794 km) (Figure 2).

A total of 345 cases were presented. Most were prostate cancer (n = 191, 54.8%), followed by kidney cancer (n = 60, 17.4%), urothelial carcinoma (n = 56, 16.2%), germ cell tumors (n = 34, 10.4), and others (n = 6, 1.2%), including penile and adrenal carcinoma. Case discussions included systemic treatment for the advanced scenario (n = 53, 15.4%) and localized/locally advanced decision (n = 292, 84.6%). Of note, the suggested strategies were mostly managed locally (n = 276, 80%); a few patients (n = 60, 17.3%) were referred to the Alexander Fleming Cancer Institute or tertiary health care centers for surgery or systemic therapy, and a minority of cases (n = 9, 2.6%) were referred for radiotherapy. Among referred patients who received systemic treatment, 2 patients were

TABLE 1.

Case characteristics

Characteristics	N = 345
Age (median)	64 years
Sex, n (%)	
Male	314 (91)
Female	31 (9)
Diagnosis, n (%)	
Prostate cancer	191 (54.8)
Kidney cancer	60 (17.4)
Urothelial cancer	56 (16.2)
germ cell tumors	34 (10.4)
others	6 (1.2)
Stage, n (%)	
Localized/ locally advanced.	292 (84.6)
Advanced/metastatic	53 (15.4)
Treatment location, n (%)	
At local place	276 (80)
Referred	69 (20)

FIGURE 2.

Distance of participating centers (kilometers)

enrolled in a clinical trial, and 1 patient was enrolled in an early access program for a treatment not yet approved in Argentina.

Discussion

The implementation of novel virtual tumor board approaches in Argentina has had a remarkable impact on reducing care disparities by providing equal access to a multidisciplinary environment for medical discussions. These models have proven to be effective in enhancing collaboration among health care professionals and optimizing patient care. Given the geographic expanse of Argentina and the rest of South America, virtual tumor boards have become even more crucial in bridging the gap in health care access and addressing the inequalities in the Argentinian[12] as well as the economic and social inequalities, challenge the achievement of the Universal Health Coverage (UHC) and LATAM countries' health systems.

In our view, multidisciplinary virtual experiences, such as vGUMDT, should be carefully addressed by health care decision-makers, given their popularity and their effectiveness. Many of the evaluated barriers require government participation to improve budget and technology access in health care facilities. The COVID-19 pandemic has led to a tremendous need to incorporate modern technology into different work scenarios. Under these circumstances, the implementation of virtual educational and medical activities may be one of the key elements that cannot be excluded in the design and execution of National Cancer Control Programs.

References

1. Booth CM, Karim S, Mackillop WJ. Real-world data: towards achieving the achievable in cancer care. *Nat Rev Clin Oncol.*2019;16(5):312-325.
2. Eichler H, Koenig F, Arlett P, Enzmann H, Humphreys A, Pétavy F, et al. Are novel, nonrandomized analytic methods fit for decision making? the need for prospective, controlled, and transparent validation. *Clin Pharmacol Ther.*2020;107(4):773-779.
3. U.S. Food and Drug Administration. Submitting documents using real-world data and real-world evidence to FDA for drug and biological products. September 2022. Available at: https://www.fda.gov/regulatory-information/search-fda-guidance-documents/submitting-documents-using-real-world-data-and-real-world-evidence-fda-drug-and-biological-products. Accessed October 26, 2023.
4. Pishvaian MJ, Blais EM, Bender RJ, Rao S, Boca SM, Chung V, et al. A virtual molecular tumor board to improve efficiency and scalability of delivering precision oncology to physicians and their patients. *JAMA Open.*2019;2(4):505-515.
5. El Saghir NS, Charara RN, Kreidieh FY, Eaton V, Litvin K, Farhat RA, et al. Global practice and efficiency of multidisciplinary tumor boards: results of an American Society of Clinical Oncology international survey. *J Glob Oncol.*2015;1(2):57-64.
6. Muchiri A, Kitur G, Elias H, Koech A, Asirwa C. Abstract PO-047: The role of virtual tumor boards in improving patient outcomes in rural settings of sub-Saharan Africa. *Cancer Epidemiol Biomarkers Prev.* 2020;29(12_Suppl):PO-047-PO-047.
7. Velu U, Shetty PS, Godkhindi VM. Importance of multi-disciplinary tumor boards during the COVID-19 global pandemic in a resource constrained country. *Asian Pacific Journal of Cancer Biology.*2022;7(4). DOI 10.31557/APJCB.2022.7.4.297-300
8. Di Pilla A, Cozzolino MR, Mannocci A, Carini E, Spina F, Castrini F, et al. The impact of tumor boards on breast cancer care: evidence from a systematic literature review and meta-analysis. *Int J Environ Res Public Health.*2022;19(22):14990.
9. Freeman HP. Poverty, culture, and social injustice: determinants of cancer disparities. *CA Cancer J Clin.*2004;54(2):72-77.
10. Esteso F, Tissera NS, O'Connor JM, Luca R, Huertas E, Sánchez Loria F, et al. Implementation of a virtual multicenter gastrointestinal tumor board to reduce cancer disparities in Argentina. *World J Clin Oncol.*2022;13(6):423-428.
11. Arora S, Thornton K, Murata G, Deming P, Kalishman S, Dion D, et al. Outcomes of treatment for hepatitis c virus infection by primary care providers. *N Engl J Med.*2011;364(23):2199-2207.
12. Palacios A, Espinola N, Rojas-Roque C. Need and inequality in the use of health care services in a fragmented and decentralized health system: evidence for Argentina. *Int J Equity Health.*2020;19(1):67.