

## Letter to the Editor

# Simultaneous presentation of low-and middle-income countries data for hematologic cancers: a welcome step towards equity

Sir,

Advances in cancer treatment over the last few decades have been nothing short of remarkable, and have led to significant improvements in survival and quality of life.<sup>1</sup> This has been possible with several noticeable changes such as discovery of molecular mechanisms of cancer, targeted drug development, and better laboratory methods. However, a majority of this benefit is confined to high income countries (HICs), and international disparities are still widely prevalent.<sup>2</sup> Several unique socioeconomic, environmental and political challenges preclude emulation of new developments in the LMIC (low-and middle-income countries) settings.<sup>3</sup>

While discussion of these issues is beyond the scope of this communication, we take this opportunity to appreciate an imperceptible barrier breached by two articles in a recent issue of British journal of hematology (BJH), which describe treatment approaches simultaneously in LMIC and HIC settings.

The first is a survey of real-world management of chronic myeloid leukemia (CML) across 33 countries including HIC and LMICs, and provides an enlightening look at how protocols developed in the HICs are not applicable universally. This survey reveals that all aspects of management, including choice of initial testing, first line therapy and management of treatment failure are variable and differ based on participating country.<sup>4</sup> The most edifying aspect is how real-world treatment goals differ based on geographical location; treatment free remission (TfR), which is sold as a highly desirable goal in recent literature, is one of the lowest priorities among LMIC physicians.

The second study is even more illustrative of these differences, and records treatment approaches to a single patient vignette of a young male with Hodgkin's Lymphoma from six different countries.<sup>5</sup> The differences in goals of therapy, choice of agents, and integration of cost considerations are striking. For instance, PET directed therapy with or without brentuximab is central to management in the US and UK, which is not feasible for a majority of patients in India. Differences in follow up patterns and approach to relapsed disease are succinctly emphasized.

The current article format is relevant to an LMIC setting such as India and can have far reaching consequences in addressing global cancer care inequity. We provide a short summary of evidence on how global cancer care is

inextricably dependent not just on progress in HIC settings but on emulation of this progress in LMIC settings as well.

First, data on natural history of hematologic malignancies from LMIC patients is sparse. In many LMICs, communicable diseases and other socioeconomic challenges continue to be prevalent, and are now joined by a rapidly increasing burden of cancer.<sup>6</sup> The causes for the same are multifactorial and include environmental and lifestyle factors.<sup>7</sup> Disease burden imposed by cancer is typically assessed through population-based cancer registries (PBCR), but these are in significant deficiency in LMIC settings. PBCRs in Asia and Africa are fraught with incomplete and low-quality data and cover less than 5% of the population, compared to more than 80% in North America.<sup>8</sup> This is ironic as these continents represent the brunt of global disease burden due relatively larger populations.<sup>9</sup> For instance, it is estimated that over 50% of cancer patients and cancer related deaths worldwide are seen in Asia. Regional socio economic and ethnic differences can also mean inferior outcomes, requiring precise geographical statistics.<sup>10</sup>

Second, there is gross under representation of LMIC patients in clinical trials on new drug development and usage, with more than 80% participants belonging to HICs.<sup>11</sup> This is an incongruous omission as cancer drugs display significant geographic and ethnic variation in pharmacokinetics.<sup>12</sup> It is inaccurate to duplicate protocols and doses studied in HICs to countries where patient populations have not received the drug as part of a clinical trial, potentially concealing true efficacy and toxicity.

Third, it is acknowledged that cancer research in LMIC settings requires overcoming a number of organizational hurdles, along with a higher number of patients seen per day and less protected time for research.<sup>13</sup>

How then, do the above articles provide a small step in addressing global cancer care equity? Cancer statistics including just HIC populations provide an imperfect picture. Accurate depiction of epidemiological data is a global obligation and not a local one. The above article format democratizes information and allows global comparison of the unique adaptations being performed in LMIC settings, which are often driven by necessity and resource constraints.

Adaptation of global developments to LMICs continues to be an imprecise science, but indigenous modification

of original HIC protocols, including those for stem cell transplantation and acute leukemia have proven extremely cost effective in resource constrained settings.<sup>14,15</sup> Despite these necessary modifications, treatment outcomes with many such modalities is approaching those seen in HICs.<sup>16</sup>

The above publishing format in BJH is a great initiative. Simultaneous analysis and presentation of data in varied settings can allow a more nuanced and unbiased interpretation of data. One can envision a new category of journal articles labelled “global trials” or “LMIC-HIC comparison”, providing affirmative action towards LMIC inclusion in clinical research and policy. This is presumably the first step before randomized trials of new anti-cancer drugs specifically include patients from LMICs. Inclusive research is a two-way street: advances in HICs can be indigenously translated to LMIC settings to improve global outcomes, and cost driven innovations in LMIC settings can translate to significant savings in HIC settings.

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