

**Comment on: Interventions to improve early detection of childhood cancer in low- and middle-income countries: A systematic review - Experience of time to diagnosis of malignancies in children in Haiti**

Dear Editor,

In their systematic review and metanalysis, Zabih et al. [1] found that the training of healthcare personnel for early diagnosis of childhood cancer and the public awareness campaigns about the disease are frequent interventions to expedite detection and diagnosis in low- to middle-income countries (LMICs). Although all studies reviewed by the investigators had risks for biases, the interventions they identified appeared to be effective. Regardless of that fact, the authors concluded that better quality of evidence is needed before recommending such interventions throughout LMIC settings.

Approximately 80% of children with cancer live in LMICs, and like the experience in Haiti, many will die due to a lack of diagnosis or late diagnosis [2]. Despite Zabih et al. finding poor-quality evidence that these 2 interventions improve early diagnosis, we value such interventions in selected settings, because they reduce childhood cancer mortality. Thus, such strategies are lifesaving for children with cancer who live in LMICs.

The purpose of this letter is to take stock of the situation in Haiti, related to early childhood cancer diagnosis. Haiti is one of the poorest countries in the Caribbean, and its health-spending budget that is only 5% of the national budget [3]. Haiti has approximately 11 million inhabitants, 35% of whom are younger than 15 years of age. The infant morbidity and mortality rate is mainly attributed to infectious diseases, malnutrition, and anemia; however,

noncommunicable diseases, such as cancer, remain a source of concern. We estimated based on Haiti demographics has approximately 504 new cases of childhood cancer per year, but cancer is not included in the national health priorities for children and adolescents. Furthermore, Hôpital Saint-Damien has the only pediatric oncology service in the country, and its capacity of 17 beds is grossly insufficient for the current cancer needs. As a result, nearly 82% of children with cancer in Haiti die, and many of them without ever being diagnosed. These problems highlight the deficiencies of the country's healthcare system, which is characterized by the unavailability of primary care and practically no health insurance (i.e., less than 3% of the population is insured). For those children who do access healthcare, another level of insufficiency they frequently encounter is the lack of cancer diagnostic equipment and supplies and a scarcity of trained pediatric oncology personnel.

Haiti's suboptimal healthcare system is conducive to not only delays in diagnosis but also completely missed cancer diagnoses. The Haitian Childhood Cancer Foundation (FHACI) carries-out sporadic media campaigns, among them to encourage the Ministry of Public Health and Population to make the government prioritize awareness through communication, training, and motivation of healthcare providers and to update the medical training curriculum to include pediatric oncology. However, better, and more defined plans are needed to improve the early diagnosis of childhood cancer in Haiti.

Chile and Peru are excellent models for national cancer plans that enacted public healthcare legislation with the commitment to provide resources for early diagnosis [4,5]. Haiti is starting with interventions to improve early diagnosis of childhood cancer by involving the local government, health care professionals, parents, and the FHACI. These regional, national, and international actors need to collaborate in writing and approving cancer legislation, developing

educational interventions, training healthcare providers, using new diagnostic technology, and reducing the cost of drugs. Increasing public awareness about childhood cancer and promoting the importance of seeking medical help early will educate parents and be conducive to early childhood cancer diagnosis. In conclusion, all stakeholders must act together to make early diagnosis of cancer a priority to improve diagnoses, treatment, and survival of children with cancer.

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**CONFLICT OF INTEREST:** None

**ETHICAL STATEMENT:** This is certifying that there are no ethical issues related to this paper and no human subject data are involved, Therefore, no patient consent was required.

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