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Abstract: Nepal currently reports a high burden of cancers. Cancer medicines and treatment costs are still one of the highest health care expenditures in the country of 28 million people where a quarter of the population lives below the poverty line. Furthermore, a risk pooling mechanism such as a health insurance is not available, and neither basic nor specialist services for cancer are affordable by private payment. Aftermath of the earthquake which is characterized by scarcity of medicines and absenteeism of doctors, might further peril the lives of people living with cancer. Moreover, health agendas including strengthening of cancer services might be overlooked during the political turmoil and sluggish efforts in rebuilding.

## Cancer at the time of Nepal's earthquakes aftermath

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## **Cancer at the time of Nepal's earthquakes aftermath**

Nepal witnessed massive earthquakes in April and May which has been suggested to damage Nepal's economy with a loss of 5-10 billion USD, and faltering GDP growth from 6% to 2%.<sup>1,2</sup> Health infrastructures in earthquake affected districts (15 out of the 75 nation-wide) have been seriously damaged, and are still waiting reconstruction in many instances.<sup>3</sup> Amidst this crisis, health system priorities for addressing the country's burgeoning cancer problem is at risk of being neglected as scarcity of medicines remains high, and absenteeism of doctors has increased due to greater employment insecurity.<sup>4</sup>

The country currently reports estimated 8,000-10,000 new cases of cancer each year.<sup>5,6</sup> Cancer medicines and treatment costs are still one of the highest health care expenditures in the country of 28 million people where a quarter of the population lives below the poverty line.<sup>7</sup>

Furthermore, a risk pooling mechanism such as a health insurance is not available, and neither basic nor specialist services for cancer are affordable by private payment.<sup>7,8</sup>

The 2015 earthquakes displaced nearly 10 million people.<sup>9</sup> Temporary-displacement combined with a situation of instability in the community and health system, can decrease the early detection and diagnosis potential of cancers. For the health system, resources (which are already stretched to meet the needs of those affected by the earthquakes) can be lost to competing priorities that otherwise may have been invested in cancer screening and treatment. An earlier review of 48 published studies found natural disasters like cyclone, flood and storm impact on treatment management and care of people with Non Communicable Diseases (NCDs), with exacerbation of illness, complications or even death.<sup>10</sup> During post hurricane Katrina in the USA, availability of transportation affected access to cancer care in patients with early stage cancer.<sup>11</sup>

We fear that a similar situation is likely as a result of the current natural crisis in Nepal. Further the Nepalese government has not prioritized cancer services, with NCD received less than 1% of Nepal's health budget in 2010 and cancer, like any other NCD, has been neglected with insignificant resources, and still remains the same.<sup>1</sup>

Despite the issues currently faced, some opportunities exist for Nepal. Gyawali and Colleagues have advocated in *Lancet Oncology* that Nepal can be a crucial juncture for future studies on cancer because of its diverse geography and climate, and populations that represents both Caucasian and Mangoloid .<sup>12</sup> Also, there are cost savings because of cheaper cancer treatments and English-based medical education which increases ease of international collaboration.<sup>12</sup> Also, Nepal can be a crucial environment for studies of climate change and the association with NCDs like cancer as both burden of NCDs and temperature is rising in Nepal.<sup>5,13</sup> This is in accordance with a 2016 editorial in *Lancet Oncology* which highlighted a need for more research in this area given the possible relationship has been poorly studied to date.<sup>14</sup> However, the first point towards achieving this goal is the establishment of a population-based statutory cancer registry.

As a signatory to the Global Monitoring Framework on Non-communicable diseases, Nepal has committed to build a cancer registry to report on cancer incidence and cancer types as an indicator for the 2025 mortality target.<sup>15</sup> There has been some effort in linking hospital data on cancer in the past, however, a systematic-linkage for aggregating all hospital registries is missing.<sup>6</sup> The International Association for Cancer Registries (IARC) puts Nepal among the countries where 'cancer registry activity has started', but has not yet reached full potential.<sup>16</sup> Knowledge transfer and collaboration between Nepal and its larger neighbours like India, and China in particular, both rated II (on a scale of I to IV) for high quality regional registry<sup>16</sup>, will

be important because of geographical proximity and strong bilateral relationships that further aids collaboration.

Besides that, in line with the Sendai Framework for Disaster Risk Reduction (2015-2030), the traditional disaster approaches for ‘building back better’ needs to incorporate NCDs like cancer with understanding of direct and indirect (preventable) factors that exacerbate them during and after the disasters, to retain and restore health of people.<sup>10</sup> Healthy people are resilient, and quickly recover from emergencies and disaster like earthquakes.<sup>17</sup> So, it is imperative to Nepal’s sustainable recovery and resilience to have disaster rebuilding, reconstruction and rehabilitation go hand in hand with health system-strengthening, building of population based registry to deal a menace of NCDs like cancer.

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