

## Video-Based Online Global Tumor Boards

Giving physicians in developing countries access to cancer experts in the U.S.

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### Global Cancer Institute At-a-Glance

Global Cancer Institute (GCI) is the only non-profit completely focused on improving survival rates for underserved cancer patients worldwide. Today, cancer death rates in developing countries are double those of the United States—GCI is working to close that gap. GCI works directly with physicians in developing countries to propagate simple interventions and programs that are common in the U.S. and proven to accelerate diagnosis, access, and treatment. GCI has three core pillars:

- **Researching Cancer.** We lead research initiatives, such as global cancer databases, surveys, and large publications to better understand the state of cancer around the world. We use our findings to design and implement effective interventions to improve cancer patient care and outcomes.
- **Enhancing Access.** We implement research-based initiatives to help underserved patients overcome health system barriers and ensure timely access to care.
- **Improving Clinical Care.** We connect oncologists worldwide to engage in tumor boards, collaborative research, and educational opportunities.

Cancer patients in developing countries face a risk of death that is double that of patients in the United States. That increased risk is primarily from lack of screening, lack of access to treatment, and treatment methods that are decades behind. Often, patients simply don't follow up with physicians after being diagnosed. It's not uncommon in developing countries for patients to show up at an emergency room with late-stage cancer—far too late for successful treatment.

And the gap between developed and developing countries is widening. By 2025, 59 percent of all new cancer cases and 68 percent of all cancer deaths will come from low- and middle-income countries.

### Leveraging Tumor Boards

Global Cancer Institute, or GCI, ([globalcancerinstitute.org](http://globalcancerinstitute.org)) is focused on bringing simple interventions that are common in the U.S. to developing countries, accelerating diagnosis and treatment, and improving survival rates. One example is that of tumor boards, where a doctor can discuss a patient's cancer and treatment options with a multidisciplinary group of colleagues. These discussions allow doctors to reach consensus on the best treatment plan and ensure that their patients are receiving the best care possible—care that has been extensively discussed and decided upon by a whole room of experts in medicine, surgery, radiation, and other subspecialties. Tumor boards are a common practice

in the U.S. and other developed countries. However, in low- and middle-income countries, tumor board meetings are rare due to fragmented health systems and busy clinic schedules.

Physicians in developing countries often work more than 14 hours a day at more than one job. There is no time for research, and there are few colleagues to compare notes with. To address these issues, GCI created video-based online Global Tumor Boards to give these physicians a sounding board and advice on difficult cases. The GCI Global Tumor Boards were launched five years ago and now draw hundreds of physicians for each session, impacting thousands of patients. Recently, GCI launched a series of Spanish- and Portuguese-language Global Tumor Boards to expand access to the content.

### How Global Tumor Boards Work

GCI utilizes Google Hangouts technology to engage an international network of doctors and connect them with world-class cancer experts in the U.S. GCI hosts Global Tumor Boards every month in breast and gynecologic cancers.

When doctors in developing countries see patients whose unique situations are particularly difficult to treat, they have the option to present their cases to world-class experts in cancer care. In just one hour, these doctors receive expert advice and are educated on the best clinical practices. GCI's panel of multidisciplinary experts come from prestigious cancer centers across the U.S., including Johns

Hopkins, Stanford University, MD Anderson, Memorial Sloan Kettering, and Northwestern Cancer Center, among others. These experts help the doctors reach a consensus on each patient's treatment.

And it's not just the doctors presenting these cases who are online. Each of their community clinics and any other global doctor can join and view the Global Tumor Board live—all they need to participate is a computer with Internet access. The events act as an educational tool for young doctors who may otherwise have difficulty performing research of their own or accessing the latest knowledge in the field. GCI has built a global network of doctors committed to sharing knowledge and expertise to improve the standard of cancer care globally.

Global Tumor Boards are a great way to engage doctors in patient-care discussions with their peers. It creates a "beehive effect," where doctors can learn together and build similar levels of clinical knowledge and styles of practice. These sessions also engage doctors in discussions about how their patient cases relate to bigger picture cancer control issues and public health interventions.

Doctors who join GCI tumor boards are from more than 50 countries in Latin America, Eastern Europe, Africa, and Asia. In total, GCI Global Tumor Boards have reached more than 550 doctors worldwide. For each individual doctor we engage in an event, we can shift their pattern of practice for at least a thousand patients per year.

### A Case Study

Here is just one example of the impact of GCI's Global Tumor Boards. During one of GCI's monthly Breast Tumor Boards, experts collaborated on a case involving a 14-year-old girl from a small farm in rural Bangladesh. The patient was only eight years old when the first lump was found, leading to her long battle with breast cancer. In six years, the girl endured two lumpectomies, two cycles of chemother-




Top: Boston-based experts participating in one of the Global Cancer Institute's Global Tumor Boards. Bottom: Doctors from a developing country sit in on a Global Tumor Board.

apy, a mastectomy with axillary lymph node dissection, and four final chemotherapy cycles. After exhausting all possible alternatives, the treating oncologist presented the case to the Breast Tumor Board and the Global Cancer Institute network for guidance.

The multidisciplinary, multinational board reviewed the case and ultimately recommended molecular testing for an ETV6-NTRK3 fusion, which was later confirmed through collaboration between Johns Hopkins and Memorial Sloan Kettering. Based on tumor results, oncologists gained approval for an experimental drug known as LOXO-101, a TRK inhibitor. The treatment was

performed at the Department of Pediatrics at Memorial Sloan Kettering Cancer Center.

The Global Cancer Institute recently spoke with an oncologist involved in the case and learned that the patient has returned home and is still taking the pill daily, but is otherwise well.

This case demonstrates how Global Tumor Boards are an invaluable tool for sharing knowledge and best practices that ultimately positively impact the lives of many patients. 

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