HIV and Cancer: Meeting a Need

In the early 1980s and into the 1990s, HIV/AIDS and HIV-associated cancers emerged in epidemic numbers causing significant mortality among infected individuals. Scientists across disease areas joined forces to attack the problem. Specialists in infectious diseases and immunology worked with oncologists who treated cancers associated with advanced HIV infection (“AIDS-defining cancers”): lymphomas, Kaposi sarcoma, and cervical cancer. Collaborating researchers developed new drugs, antiretrovirals, and chemotherapy, or drugs that intensify immunological response, like immune checkpoint inhibitors. Because the data is so thin, HIV patients sometimes make decisions based on fear rather than evidence, and oncologists may reduce dosages when a patient’s T cell count drops.

Dr. Emu and Lacy are determined to start filling the data gap by enrolling HIV patients in clinical trials for cancer. There is already some evidence, she adds, that HIV alters cancer biology. Her lab has found that tumor microenvironments in non-small cell lung cancer and in head and neck cancer look different in patients with HIV. "I think that's where this clinic can be hugely impactful," she said.

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Dr. Emu notes that HIV physicians and patients are focused on maintaining immunological health and may be leery of cancer treatments that cause immunosuppression, such as radiation and chemotherapy, or drugs that intensify immunological response, like immune checkpoint inhibitors. Because the data is so thin, HIV patients sometimes make decisions based on fear rather than evidence, and oncologists may reduce dosages when a patient’s T cell count drops.

Dr. Emu and Lacy have identified Smilow Cancer Hospital oncologists in every disease area to help build Yale's expertise in HIV and cancer. Under the new program, when Dr. Emu or another HIV physician sees a patient with cancer, they will contact the patient’s oncologist to talk through issues such as drug interactions and possible treatments. The program provides information, support, and guidance to HIV patients, physicians, and oncologists.

"We’re a natural team for this. The program comes from a history of caring for patients with HIV, and also seeing a real change in the types of cancers as well as an increasing number of cancers in our HIV clinic," she said.

"We've come a long way," Dr. Emu said. "We have the data, the knowledge, and the expertise to support these incredibly effective therapies to help people like Brinda who really know the field, and we can feel comfortable with the treatment plan we come up with."

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