

IMMUNO PHOTONICS®

A New Frontier in Treating Cancer: The Great Potential of Interventional Immuno-Oncology™



“After my stage four cancer diagnosis and after failing other treatments, my doctor told me I should get my affairs in order and say my goodbyes. But then I discovered a clinical trial with a new approach to treating this terrible disease. It involved an injection of an experimental drug directly into the tumor. After the injection, I felt okay, I was able to return home right away and, most importantly, I was incredibly fortunate to be a responder. I was given an opportunity to see my son get married and continue enjoying my life with family and friends.” – Anita, clinical trial participant.

Despite the remarkable advancements in understanding cancer immunology that have led to breakthrough innovations, effectively treating solid tumor cancers remains a big challenge. In response, the groundbreaking approach from Immunophotonics aims to set a new standard of care, addressing unmet medical needs.

One of the main issues in tackling cancer is that solid tumors possess a mixed cellular composition and an intricate tumor microenvironment that enables the cancer to grow and spread by hiding from or suppressing immune surveillance. This allows the cancer to adapt and be concealed from its predators

like a chameleon entering a new environment. New therapeutic approaches such as cancer immunotherapy, combination therapies, targeted energy medicine, and cellular therapies attempt to modify multiple aspects of tumor biology and the tumor microenvironment to unveil the cancer to the immune system. While many of these novel treatments have benefited some patients, they can be costly, can have complicated and time-consuming steps to prepare the medicine, and have not succeeded in overcoming the many challenges in treating solid cancers.

In response, Immunophotonics has developed a new, practical and promising approach to combat cancer that combines immediate tumor destruction with immune activation. In early clinical studies, this approach has been shown to generate an anticancer immune response that attacks the patient’s own cancer, where tumor-specific T- and B-cells are produced to hunt down, identify, and destroy the cancer throughout the body.

“Immunophotonics has a really interesting approach to cancer, and that’s why I am interested in helping them,” said Dr. Jonathan Knowles, a cancer research expert, previously a Board Member for biotech success Genentech and formerly Head of Group Research at pharmaceutical giant Roche.

Approximately 50 percent of all cancer patients will receive treatment with some form of energy medicine, such as radiation or tumor ablation, as a part of their standard-of-care treatment plan. These routine treatments are intended to target and destroy individual tumors. The Immunophotonics team recognized that through these procedures, valuable information from the dying tumor cells is released, and it is exactly this information that Immunophotonics is able to use against the cancer. Presently, this information, otherwise known as tumor antigens and “danger signals,” quickly dissipates and is disposed of by the body, never to be seen again. In other words, the millions of tumor ablation and radiation treatments occurring every year, around the globe, have the potential to be something much more.

To capture that potential, Immunophotonics developed IP-001, a new drug that is intended to use the tumor antigens to remove the cancer’s ability to hide from the immune system. “Think of IP-001 as a sticky molecule that retains critical tumor information and activates multiple types of immune cells in the right way,” said Dr. David Anderson, Immunophotonics Chief Scientific Officer. “When IP-001 is combined with tumor identifying information, it ignites a whole-body immune response against the patient’s own cancer.” As a life-long researcher responsible for supporting the development of six drugs now on the market, Dr. Anderson also shared why he thinks this molecule is special. “It activates multiple cancer-



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fighting immune components as a single molecule, something that I haven’t seen before. That’s why I am hoping this will be my seventh drug brought to market and benefit cancer patients in a meaningful way.”

IP-001 is the first immune-activating tool in the emerging field of Interventional Immuno-Oncology™ (IIO), a field pioneered by Immunophotonics. IIO integrates energy medicine with a specialized form of immunotherapy, which brings several intended benefits in the treatment of cancer. This includes enhanced tumor targeting with local and systemic control of the cancer in a personalized therapy that initiates immediately, thereby saving precious time and cost over other approaches.



Beyond the breakthrough potential, IP-001 fits seamlessly into the existing clinical workflow. Patients are already going to receive energy medicine treatments at virtually every oncology center around the world, and with a simple injection of IP-001 during that same procedure, those routine treatments could achieve greater clinical benefit without additional treatment scheduling. The goal of IP-001 is to address the unmet clinical needs of disease control, recurrence prevention, and improved survival following standard-of-care minimal- or non-invasive tumor destruction treatments.

Now in phase 2 clinical development, IP-001 has demonstrated its versatility as a tumor-agnostic immunoadjuvant – a stimulator of the immune system. Safety and signals of clinical efficacy have been observed in several solid tumor indications, and according to Jonathan Knowles, that’s why it is incredibly important to conduct the next set of clinical trials. While additional clinical trials are necessary to assess the safety and efficacy of this emerging approach, the novelty of the mechanism of action and the encouraging early clinical data have paved the way for the company to recently partner with Johnson & Johnson Enterprise Innovation in a research collaboration and AngioDynamics in a clinical collaboration. The company is also working closely with global leaders in interventional radiology and medical oncology as it prepares for expanded clinical development.

“Currently, millions of tumor ablation procedures are performed worldwide, yet they only scratch the surface of their potential. With our innovative approach, these standard treatments could be transformed into powerful immunotherapies, turning every procedure into an opportunity to mobilize the body’s natural immune system against cancer. Quite frankly, we are on the brink of a major breakthrough that could transform the lives of cancer patients worldwide, bringing new hope to patients globally,” concludes Lu Alleruzzo, CEO Immunophotonics. 