A Roadmap to Groundbreaking Research
at The Ben & Catherine Ivy Center for Advanced Brain Tumor Treatment

Thanks to the generous support of our community, The Ben & Catherine Ivy Center for Advanced Brain Tumor Treatment is currently home to some of the most exciting developments in brain cancer research. We’d like to invite you to see it up close.

Based on pioneering work that The Ivy Center director Charles Cobbs, M.D., began more than 15 years ago, our modest yet powerful team is this close to showing the world that a common virus called cytomegalovirus (CMV) fuels the highly aggressive brain tumor glioblastoma (GBM). And that will open the door to new targeted therapies and vaccines, giving patients hope where there was none before.

This revolutionary work is taking a major leap forward in 2019. Mohsen Karimi, Ph.D., has joined us from the Karolinska Institute in Sweden to lead a study that will look for even more definitive proof that CMV drives tumor growth.

And this is just the beginning. Dr. Cobbs’ team has found CMV in other cancers, including breast, lung, colon, prostate, throat, tongue and melanoma. A GBM breakthrough could lead to even more cures.

Turn the page over to meet the team, and then join us on a tour of the The Ivy Center’s research lab to experience this groundbreaking research that people like you have made possible.
The Ivy Glioblastoma Atlas Project is informed by the map of the tumor's complex microenvironments, which is focused on building and maintaining by research scientist Ralph Puchalski, Ph.D. This map was recently featured in *Science*.

Dr. Cobbs didn’t just discover the link between CMV and GBM (a finding which has led to hundreds of publications around the world), he also scrub in to handle the delicate work of removing the tumors that fuel this vitally important research.

Before a patient with GBM undergoes surgery to remove the tumor, research coordinator Nathan Hansen briefs them on the project and secures their consent to collect a sample for further study. From there he gives the rest of the team a heads-up to be ready for processing.

Like a cancer cartographer, Ralph Puchalski, Ph.D., is focused on building and maintaining The Ivy Glioblastoma Atlas Project. This map of the tumor’s complex microenvironments is informing new therapeutic treatments and was recently featured in *Science*.

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This is where the search for CMV begins. Research scientist Brian McEllin, Ph.D., uses a very sophisticated staining technique to search brain tissue samples for the virus under a high-powered microscope. And he’s found a lot. More than 90% of samples we’ve examined have CMV.

When they’re not heads-down on their own projects, pre-med students Lisa DePledge and Keenan Piper assist with the CMV research, offering a fresh perspective that The Ivy Center eagerly welcomes through its internship program.

Just like humans, viruses have DNA. That’s what Mohsen Karimi, Ph.D. is decoding as he takes the next step in investigating the tumor. Once he can identify the proteins that make up CMV, Dr. Cobbs’ team can create a vaccine to stop brain cancer in its tracks.

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