

## The Mechanisms of Early Detection

**I**N THE MID-1990S, **CLEMENS ESCHÉ, M.D.**, WAS a young dermatologist in Berlin, Germany, when he began seeing patients with advanced stages of melanoma. As much as he wanted to help them, he soon realized that in too many cases there was little he could do.

“Sometimes I could help patients not to be afraid to die,” Esche explains, “but too often I could not help them with their disease.”

That early experience motivated Esche to study ways either to detect the disease very early, when it can be cured, or to treat advanced melanoma more effectively. To do that, Esche knew he should join a medical center known for both its research and treatment of the disease. He came to Hopkins.

Now Esche finds himself in the thick of basic research into the mechanisms of the disease, in the hopes of developing a vaccine therapy. One target is dendritic cells, which have been



**Researcher Clemens Esche, pondering the preventive power of a screening test for melanoma.**

shown to activate T cells, which attack tumors. By finding a way to increase the number of these killer cells in tumors, Esche theorizes, doctors may be able to increase survival. But that won't be easy, he adds, because melanoma is not a homogeneous disease. Each of its subtypes would have to be targeted by a vaccine.

“We'll be able to prolong survival, but it won't be an ultimate cure,” says Esche, who is planning a trial in which dendritic cells will be injected directly into tumors.

The real answer, Esche believes, may reveal itself in molecular genetic approaches to early detection, which he is also exploring. Dermatologists know that people prone to sunburn, and those with numerous moles, are susceptible to melanoma, but there is no screening test that predicts risk. Pointing to the work of Hopkins geneticists **Bert Vogelstein, M.D.**, and **David Sidransky, M.D.**, who are developing blood, urine and stool tests to detect colon cancer early, Esche envisions such a test for melanoma.

“The early research suggests that we really have a good chance to detect much earlier,” Esche says. “If you know who is at risk, you can watch closely and operate early, before the disease becomes life-threatening.

**For more information:** ☎ 443-287-3862. ■