SPEAKER 1: In measuring the malignant cells in the blood, the first screen, since CTCL is a malignancy of CD4 T-cells, and normally, CD4 T cells comprise the majority, perhaps 2/3 or 3/4 under the normal circumstance, of the T cell populations in normal blood, the first thing to look for is an increased ratio between CD4 and CD8 T-cells on classical cytophotographic examination using monoclonal antibodies of peripheral blood.

So if one gets a ratio that's five or higher between the CD4 and the CD8 T-cells, there is a very good chance that there is an increased population of the malignant CD4 malignant cell population in the blood. A more specific way to look at it, then, is to use so-called V beta monoclonal antibodies. There are at least 50 different families of T-cell receptors on the more than the billion different clones of T-cells, but they can be divided into approximately 50 families or more.

And there are monoclonal antibodies available that identify these 50 or more families. These are not actually truly clone specific CTCL markers, but they are very close to it. You can see that if you have 50 different antibodies covering nearly all the T-cell population, on the average, approximately 2% of the T-cells will be in any one of these families. So if you use all 50 anti-V beta antibodies to screen each patient, you will commonly discover that one of those V beta families is much higher than 2% of the total.

That's a marker that you've now got to follow that patient's malignant population, and that's something that we recommend doing routinely. That way, you can follow the rise and fall of that population in response to the therapy. You can also measure T-cell subsets directly in skin biopsies of involved skin, but the particularly helpful involvement of following of the involvement of the blood is the use of these anti-T-cell V beta antibodies.