**SPEAKER:** As far as what types of chronic graft versus host disease respond better to ECP, my experience is that it is particularly useful for chronic graft versus host disease of the mouth and also of the skin, and particularly sclerodermatous forms. In my experience, lichenoid forms may not be as responsive as sclerodermatous forms. and there is no good explanation for this.

Other forms of second-line therapy include rituximab, pioneered by the Dana-Farber group, Corey Cutler. And actually, this form of therapy is particularly useful for also skin, mouth, eyes, and not so effective for visceral involvement of chronic graft versus host disease.

More recently, in the last few months, we had an FDA approval of the first drug for chronic graft versus host disease. There are very few things that are FDA-approved for allogeneic transplantation in general. And actually, nothing up until now was FDA-approved for the treatment of graft versus host disease.

So this is really the first FDA approval for a drug intended to treat graft versus host disease, and that is ibrutinib. Ibrutinib was recently approved for the treatment of chronic graft versus host disease failing corticosteroids. There are ongoing randomized studies that are evaluating the use of ibrutinib as a frontline therapy. Other agents that are in the horizon that are not FDA-approved [INAUDIBLE]. I mean, acute graft versus host disease.

The response rate varies depending on the report that you read, but they are as high as 60% to 80%. And of course, the survival outcomes in these patients depend on the severity of the involvement and also on the involvement of other organs, in addition to the skin.

For steroid refractory acute graft versus host disease of the gastrointestinal tract, different things have been tried with different degrees of success. ATG has been used pretty classically, although not in the last several years. I have studied infliximab as a second-line therapy with response rate of approximately 60% to 70%, with not a lot of difference in terms of survival outcomes, when compared this study with historical results that have been reported.

Extracorporeal photopheresis has been shown to also be effective in acute graft versus host disease of the gastrointestinal tract, particularly when used earlier in the course of the disease. The most favorable results came from studies by Greinix and collaborators from the Austrian group, and their numbers are response rate as high as 70% to 80% And again, not much can be said in terms of survival outcomes.

As far as acute graft versus host disease of the liver, this is the most infrequent type of acute graft versus host disease. It Is also, just like gastrointestinal acute graft versus host disease, very difficult to treat. And actually, photopheresis is particularly useful for acute graft versus host disease of the liver. In my study, I had responses of about 50%.

And usually, these responses will happen over time, over a long period of time. So acute graft versus host disease of the liver is not a disease that is easily reversible, and it really takes time to resolve. So we really need to be patient with it. In all organs, photopheresis has been shown to have a steroid sparing effect. That means, again, that it improves your capacity to taper steroids off without a reflare.

As far as the treatment of chronic graft versus host disease, once again, the first line is corticosteroids. In this case, it's prednisone at a dose of 1 milligram per kg per day, initial dose. And then this is tapered according to, usually, institutional guidelines or preferences. There are taper recommendations out there coming from the Seattle group and others that can be followed. But again, the response to initial therapy with prednisone is approximately 50%, again. So there's 50% of patients that are not going to respond.

In the case of chronic graft versus host disease, the timing of response is very important to take into account, because in acute graft versus host disease, as I said, we expect a response within the first week in patients that are hopefully going to have a better outcome. In chronic graft versus host disease, we have to set different expectations with a patient, because responses can occur over a period of two to three years and sometimes longer.

And there is data from the Seattle group that shows that patients can be on immunosuppression for as long as seven or more years. So what I want to say is that the kinetics of the response is very different here.