




aGvHD, cGvHD

## Extracorporeal photopheresis for the treatment of acute and chronic graft-versus-host disease

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Extracorporeal photopheresis (ECP) is commonly used either in combination with infliximab or monotherapy as second- or third-line therapy for patients with graft-versus-host disease (GvHD) who are dependent or refractory to steroids. [Ioanna Sakellari et al.](#) from [George Papanikolaou Hospital](#), Thessaloniki, Greece, prospectively evaluated the safety and efficacy of ECP as a second- or third-line treatment in patients with GvHD treated at their center. The study was [published](#) ahead of print in the *Journal of Clinical Apheresis*.

The primary endpoints of the study included overall response rate (ORR) and overall survival (OS). Secondary endpoints were incidences of infections during early post-transplant period and transplant-related mortality (TRM).

### Patients and characteristics:

- Patients received hematopoietic stem cell transplantation according to the standard EBMT indications
- N = 21 patients with grade III-IV acute GvHD, median age = 44 years (range, 22–67)
- N = 88 patients with extensive chronic GvHD, median age = 35 years (range, 19–64)
- Eight patients receiving  $\leq 4$  ECP sessions were excluded from study

### Key findings:

#### Acute GvHD

- ORR: 84%; of these acute GvHD patients 15 achieved partial whereas one complete response
- Immunosuppressive therapy was reduced in 11/19 patients
- 1-year TRM: 17.6%
- 1-year TRM associated with steroid refractoriness and lack of response to therapy
- 1-year OS: 52.5%
- 1-year OS showed significant association with higher number of ECP sessions

#### Chronic GvHD

- ORR: 73%; of these chronic GvHD patients, 35 achieved complete and 25 partial response

- Cutaneous sclerosis manifestations showed correlation with higher response rates
- 5-year TRM: 24.1%
- 5-year TRM was correlated only with a number of ECP sessions
- 5-year OS: 64.5%
- 5-year OS correlated with number of ECP sessions and cutaneous manifestations

In summary, this study indicates that ECP is safe and effective for the treatment of GvHD, especially if it is administered early. The study group stated that “because available data do not favor one agent for second-line therapy of GVHD above another, our results suggest that its choice should be based on potential toxicity, physician experience, and availability of the treatment.”

## References

1. Sakellari J. et al. Favorable impact of extracorporeal photopheresis in acute and chronic graft versus host disease: Prospective single-center study. J Clin Apher. 2018 Nov 5. DOI: [1002/jca.21660](https://doi.org/10.1002/jca.21660). [Epub ahead of print].

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