



GvHD Prophylaxis

## IACH 2018 | Calcineurin and mTOR inhibitor-free graft-versus-host disease prevention

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The 1st Annual Meeting of the International Academy for Clinical Hematology (IACH) took place in Paris, France, on September 27–29, 2018. On Friday 28 September, a non-Hodgkin lymphoma session was held, with an abstract presented entitled “Calcineurin and mTOR inhibitor-free GvHD prophylaxis” by Dr. Samer Al-Homsi from NYU Langone Health, New York, NY, USA.

The combination of methotrexate or mycophenolate mofetil (MMF) and a calcineurin or mTOR inhibitor for graft-versus-host disease (GvHD) prophylaxis after allogeneic hematopoietic stem cell transplantation (allo-HSCT) have shown modest clinical activity. Furthermore, these regimens have unfavorable safety profiles, impair immune reconstitution, and weaken graft-versus-tumor (GvT) effect. There is an unmet need to develop new, more efficient strategies for the prophylaxis of GvHD.

- Calcineurin and mTOR inhibitor-free GvHD prophylaxis seems effective, feasible and safe in matched-related and unrelated-donor transplantation
- A novel combination of post-transplantation cyclophosphamide (PTC) and bortezomib for GvHD prophylaxis may allow wider applicability of allo-HSCT and early introduction of small molecules and immunologics to prevent relapse
- PTC and bortezomib may be a feasible alternative for patients with renal insufficiency
- PTC and ixazomib combination yielded more efficient suppression of tumor necrosis factor (TNF)- $\alpha$  as well as was able to rescue more mice than either of these drugs given alone as monotherapy

Dr. Samer Al-Homsi concluded by stating that calcineurin and mTOR inhibitor-free GvHD prevention seems feasible with a modest toxicity profile. Further trials are underway to confirm these findings.

### References

1. Al-Homsi S. et al. Calcineurin and mTOR inhibitor-free GvHD prophylaxis. 1st Annual Meeting of the International Academy for Clinical Hematology (IACH), Paris, France.

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