Mosunetuzumab in relapsed/refractory follicular lymphoma (RRFL) – Efficacy and Safety as Monotherapy and in Combination regimen: A systematic review

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Introduction

Mosunetuzumab is a CD20xCD3 bispecific monoclonal antibody that received FDA approval in 2022 for relapsed/refractory follicular lymphoma (RRFL). This systematic review evaluates its efficacy and safety both as monotherapy and in combination regimens.

Aim

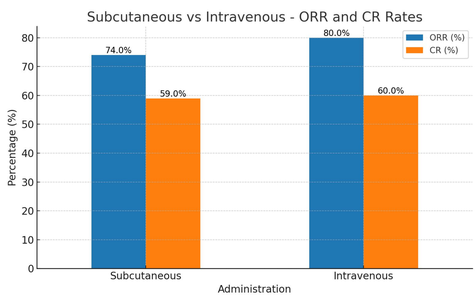
To assess the clinical efficacy and safety profile of mosunetuzumab in patients with relapsed/refractory follicular lymphoma (RRFL), both as a standalone treatment and in combination therapy.

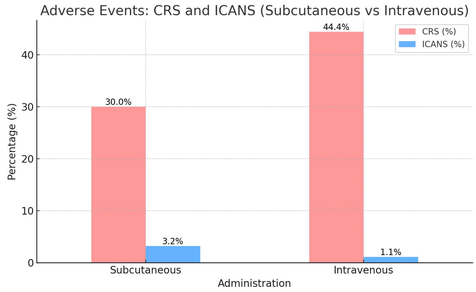
Objectives

- To evaluate the efficacy and safety of mosunetuzumab in RRFL, both as monotherapy and in combination with lenalidomide.
- To compare outcomes between different administration routes.

Methods

- Databases searched: **PubMed, Scopus, Embase**
- Initial results: **267 studies**
- Inclusion: Clinical trials focusing on mosunetuzumab in RRFL
- Final sample: **4 clinical trials** (Phases I and II) with **292 patients**





Results

Monotherapy (M):

- **Patients:** 265
- **Routes:** 94 SC, 171 IV
- **ORR:** 68% – 80%
- **CR:** 50% – 68.4%
- **PFS:** 11.8 – 24 months
- **DOR:** 15 – 22.8 months

Adverse Events (AEs):

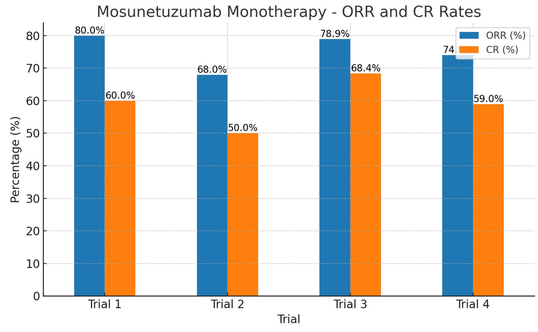
- CRS: 30–47.4% (mostly Grade 1–2, early cycle)
- ICANS: 1.1–5.26%
- Others: Grade 3/4 neutropenia, fatigue, hypophosphatemia, infections
- Discontinuation due to AEs: 3.19% – 10.5%

Subcutaneous (SC) vs. Intravenous (IV):

- **ORR:** 74% (SC) vs. 80% (IV)
- **CR:** 59% (SC) vs. 60% (IV)
- **PFS:** 18.5 (SC) vs. 24 months (IV)
- **CRS:** 30% (SC) vs. 44.4% (IV)
- **ICANS:** 3.19% (SC) vs. 1.1% (IV)

Combination (M + Lenalidomide):

- **Patients:** 27
- **ORR:** 92% ;**CR:** 77% ;**PR:** 15%
- **Grade 3/4 AEs:** 30% (mainly neutropenia – 19%)
- **CRS:** 30% (mostly Grade 1–2, early cycle)
- **Discontinuation:** 0%



Summary

Mosunetuzumab monotherapy is highly effective in RRFL with manageable safety.
Subcutaneous administration offers similar efficacy with potentially improved convenience.
M+Lenalidomide shows even higher response rates and warrants further investigation.

Conclusion

- **Monotherapy** achieves consistent ORR and CR rates with acceptable safety, making it a strong option for RRFL.
- **Combination therapy** (M+L) may enhance efficacy further and is being explored in Phase III trials.
- **Subcutaneous dosing** could improve patient experience without loss of efficacy.
- Further large-scale studies are needed to confirm long-term outcomes and optimize treatment protocols.

References

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