Endpoints: *Long-term kidney function*^{1,2}: Time to unfavorable kidney outcome, LN flare, and 30% and 40% eGFR decline; chronic eGFR slope; sustained eGFR decline; CRR with ≤7.5 mg/day prednisone **B-cell recovery**³: Time to peripheral B-cell recovery after last dose of obinutuzumab; relationship between time to B-cell recovery and efficacy/safety

Obinutuzumab: (n = 63); mean age, 33.1 years; 87% women

Placebo: (n = 62); mean age, 31.9 years; 82% women

Eligibility: ISN/RPS Class III or IV (±V) LN by Bx within 6 months; UPCR >1 on 24-hour collection

TRIAL DESIGN

Phase II multicenter, 1:1 randomized, 104-week double-blind placebo-controlled trial

Premedication with MP 80 mg IV

Obinutuzumab (n = 63) | 1,000 mg/day

Day 1 and Week 2, 24, and 26

Premedication with placebo MP

Placebo (n = 62)

Day 1 and Week 2, 24, and 26

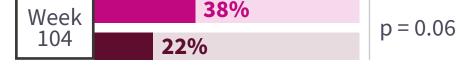
Standard of care

MMF (or **MPA**): target dose of 2.0–2.5 g/day of MMF (or equivalent). CS: 1-3 IV infusions of MP 1,000 mg prior to randomization and oral prednisone 0.5 mg/kg tapered to 7.5 mg/day by Week 12 and held

Obinutuzumab Placebo KIDNEY OUTCOMES^{1,2} **HR** (95% CI); all p < 0.05 **Favors Favors** No Obinutuzumab difference placebo **Unfavorable kidney outcomes** 0.40(0.20-0.80)LN flare 0.43(020-0.95)First 30% eGFR decline from baseline 0.20(0.06-0.61)First 40% eGFR decline from baseline 0.09(0.01-0.73)

CRR and ≤7.5 mg/day of prednisone* Proportion of patients





*At Week 76 and 104, ≤7.5 mg/day of prednisone was maintained from Week 64 to 76 and Week 92 to 104, respectively.

Sustained eGFR declines of 30% vs 40% were numerically lower in patients receiving obinutuzumab vs placebo.

Obinutuzumab was associated with a significant difference in attenuation of eGFR slope decline compared with placebo (difference: 4.10 mL/ $min/1.73 m^2/year; p = 0.043).$

(N = 51)

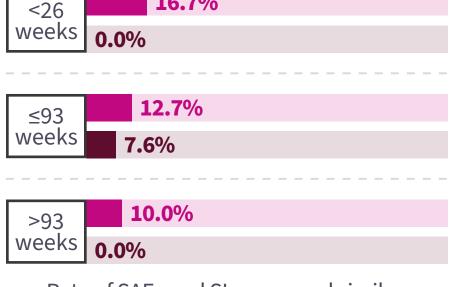
B-CELL RECOVERY³

the last obinutuzumab dose <26 weeks ≤93 weeks >93 weeks 21.6 5.9 **72.5** % % % (n = 3)(n = 37)(n = 11)33.3% 48.6% 45.5% (1 patient) (18 patients) (5 patients) achieved achieved achieved CRR CRR **CRR**

Time to B-cell recovery from

Safety of obinutuzumab **SAEs** SI treated patients Rate of AEs per 100 PYs

16.7%



Rate of SAEs and SIs appeared similar, irrespective of the duration of B-cell depletion.

Obinutuzumab was associated with improved long-term preservation of kidney function with steroid-sparing effects, with the majority of patients recovering B cells within 93 weeks of the last dose. The phase III REGENCY trial (NCT04221477) is currently ongoing.

Abbreviations: AE, adverse event; Bx, biopsy; CI, confidence interval; CRR, complete renal response; CS, corticosteroid; eGFR, estimated glomerular filtration rate; HR, hazard ratio; IV, intravenous; ISN, International Society of Nephrology; LN, lupus nephritis; MMF, mycophenolate mofetil; MP, methylprednisolone; MPA, mycophenolic acid; PY, patient-year; RPS, Renal Pathology Society; SAE, serious AE; SI, serious infection; UPCR, urine protein-to-creatinine ratio.

- 1. Rovin B, et al. Arthritis Rheumatol. 2023. Online ahead of print. DOI: 10.1002/art.42734
- 2. Rovin B. Oral abstract #784. ACR Convergence 2023. Nov 12, 2023; San Diego, US.
- 3. Vital E. Poster #1511. ACR Convergence 2023. Nov 10-15, 2023; San Diego US.



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