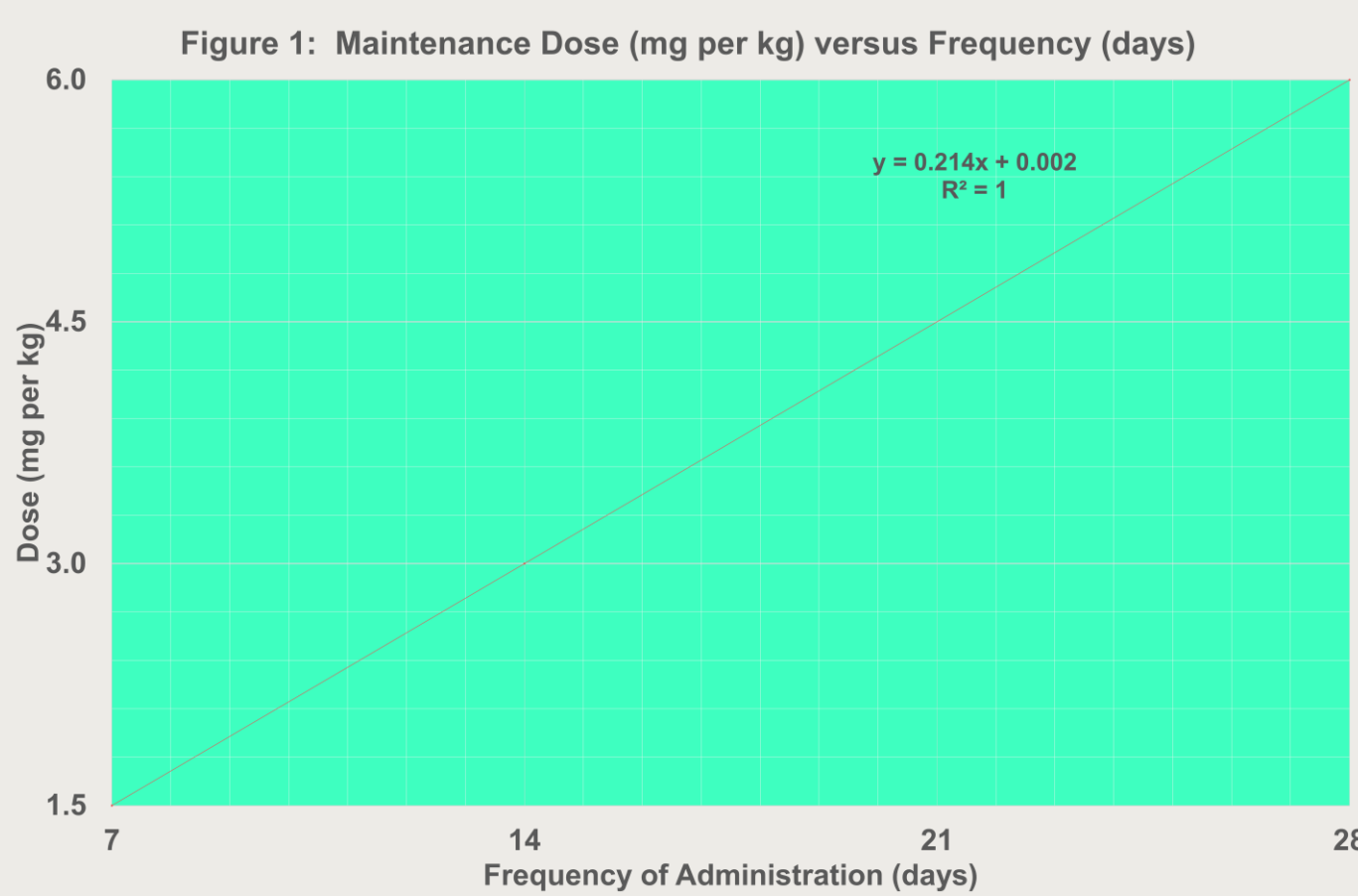


# Application of a Patented Alternate Dose Regimen Identification System in Optimizing the Emicizumab-kxwh Regimen

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## METHODS:

The system is designed with the understanding that the pharmacokinetics of emicizumab-kxwh – following a loading regimen – are linear. Plotting the 3 approved maintenance regimens as dose (mg per kg) vs. frequency (days) reveals that for every 1 day the interval is adjusted, the dose should change by plus or minus 0.214 mg per kg ( $y=0.214x$ ;  $R^2=1$ ) to maintain expected plasma steady state and associated efficacy (Figure 1).

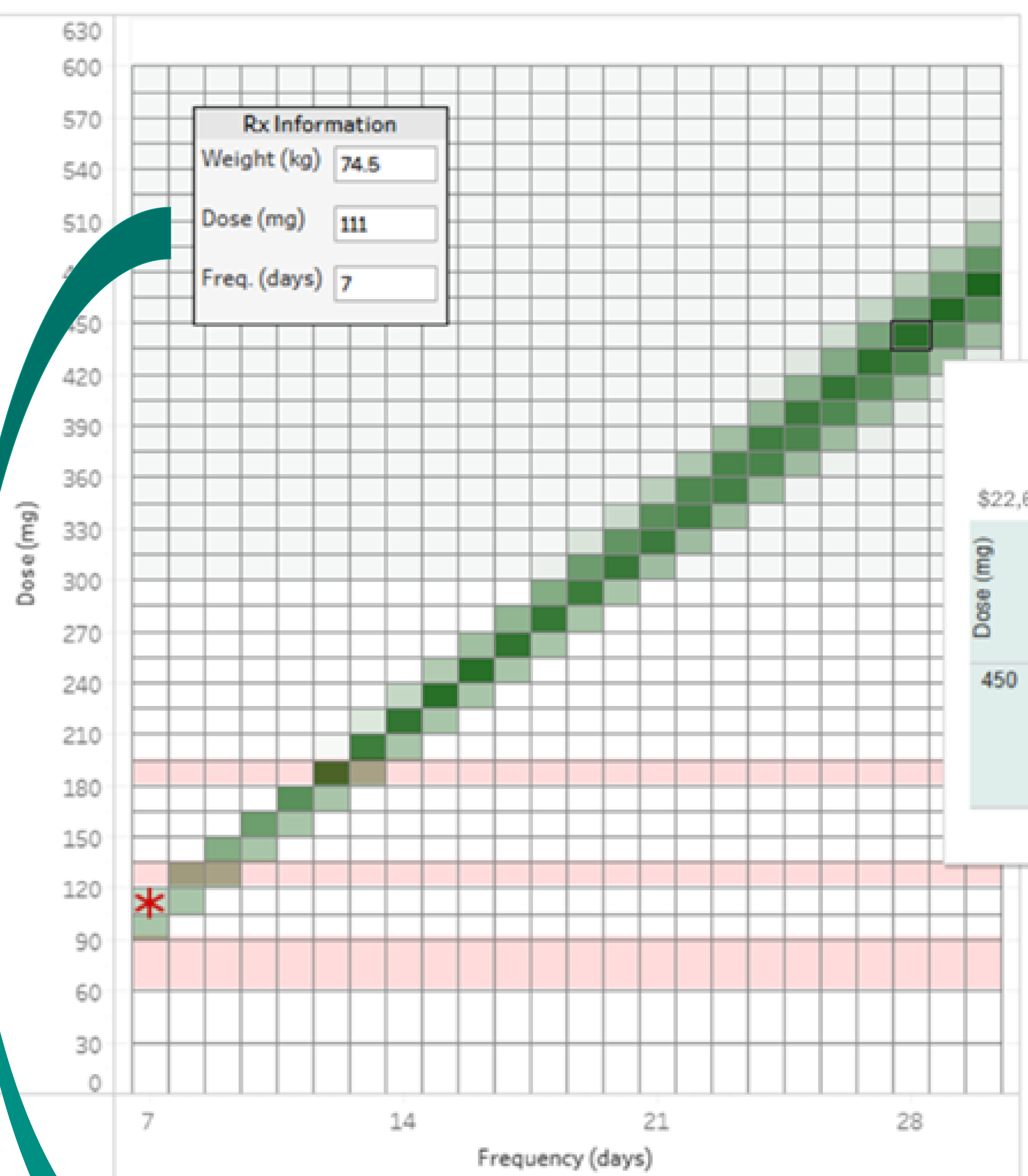


## FEATURES:

- **Red star:** represents the originally prescribed regimen (mg per kg dose and frequency)
- **Dark green box:** regimen falls within 1/100<sup>th</sup> of the patient specific pharmacokinetic profile
- **Light green box:** regimen falls within 1/10<sup>th</sup> of the patient specific pharmacokinetic profile
- **Pink row:** represents use of a vial with a different concentration, necessitating a separate injection

## SAVINGS:

- Waste is defined as drug that must be discarded with each dose (owing to single-use vial status)
- Based on an AWP of \$145.08 per mg
- Per dispense savings: waste avoided per dose X doses per dispense
- Annual savings = dispense savings X 13 fills (28 days supply)



*Alternate Dose  
Regimen  
Identification  
System interface*

450 mg every 28 days:  
1.51 mg/kg Q7D equal

\$22,632.48\* lower than prescribed dose over 30 days.

Dose (mg)	Injections	Vials	30mg/mL	60mg/0.4mL	105mg/0.7mL	150mg/mL	300mg/2mL
450	2	2				1	1
	2	3				3	
	2	6		5		1	
	2	6		4	2		

\*Waste/Savings calibrated for AWP on Jan. 2025

*U.S. Patent No.  
12,073,931 B2*

## DATA ENTRY

### Rx Information

- ☐ Patient weight in kg
- ☐ Prescribed dose in mg
- ☐ Frequency of administration in days

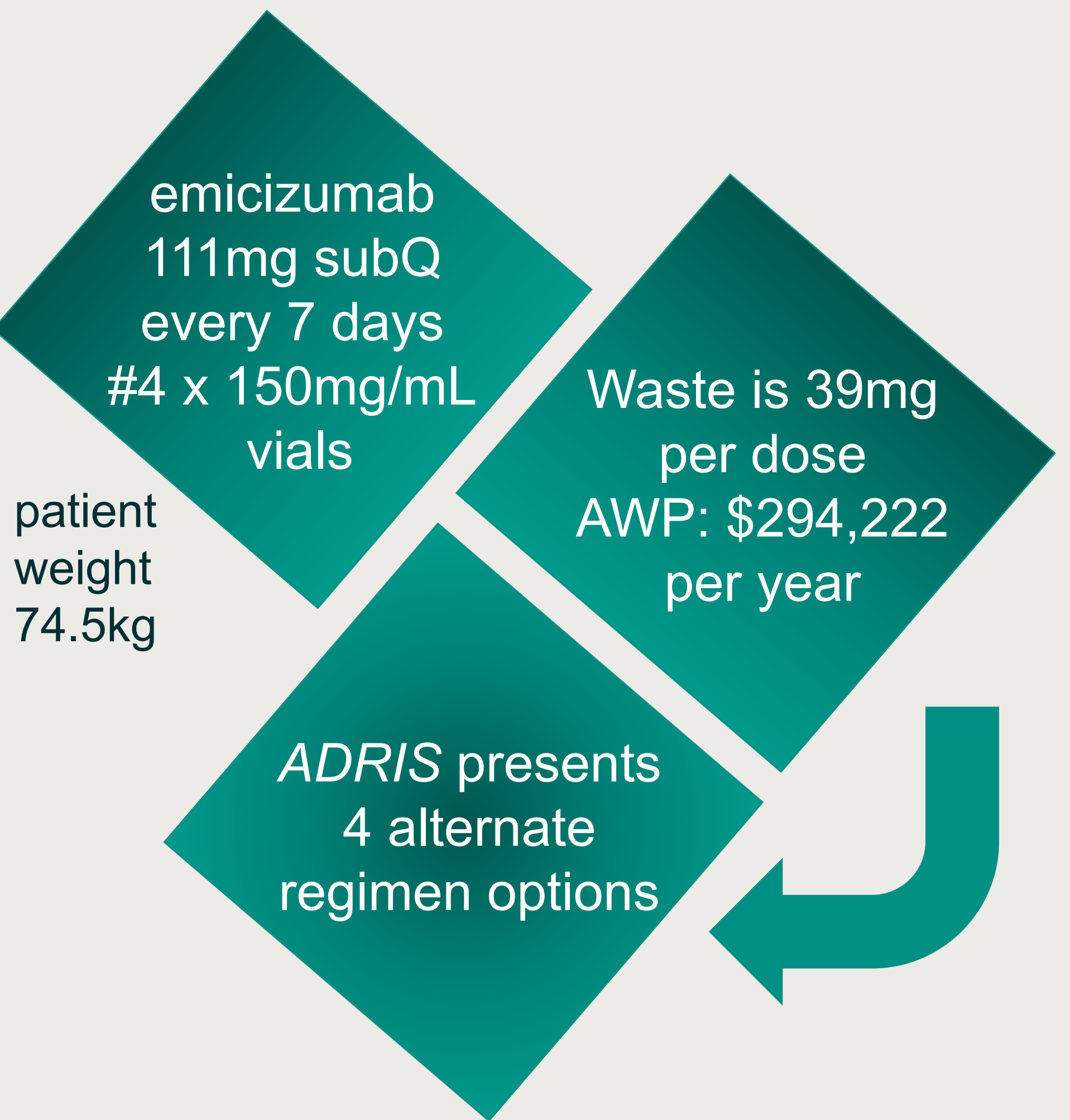
## OUTPUT

### Custom Regimens

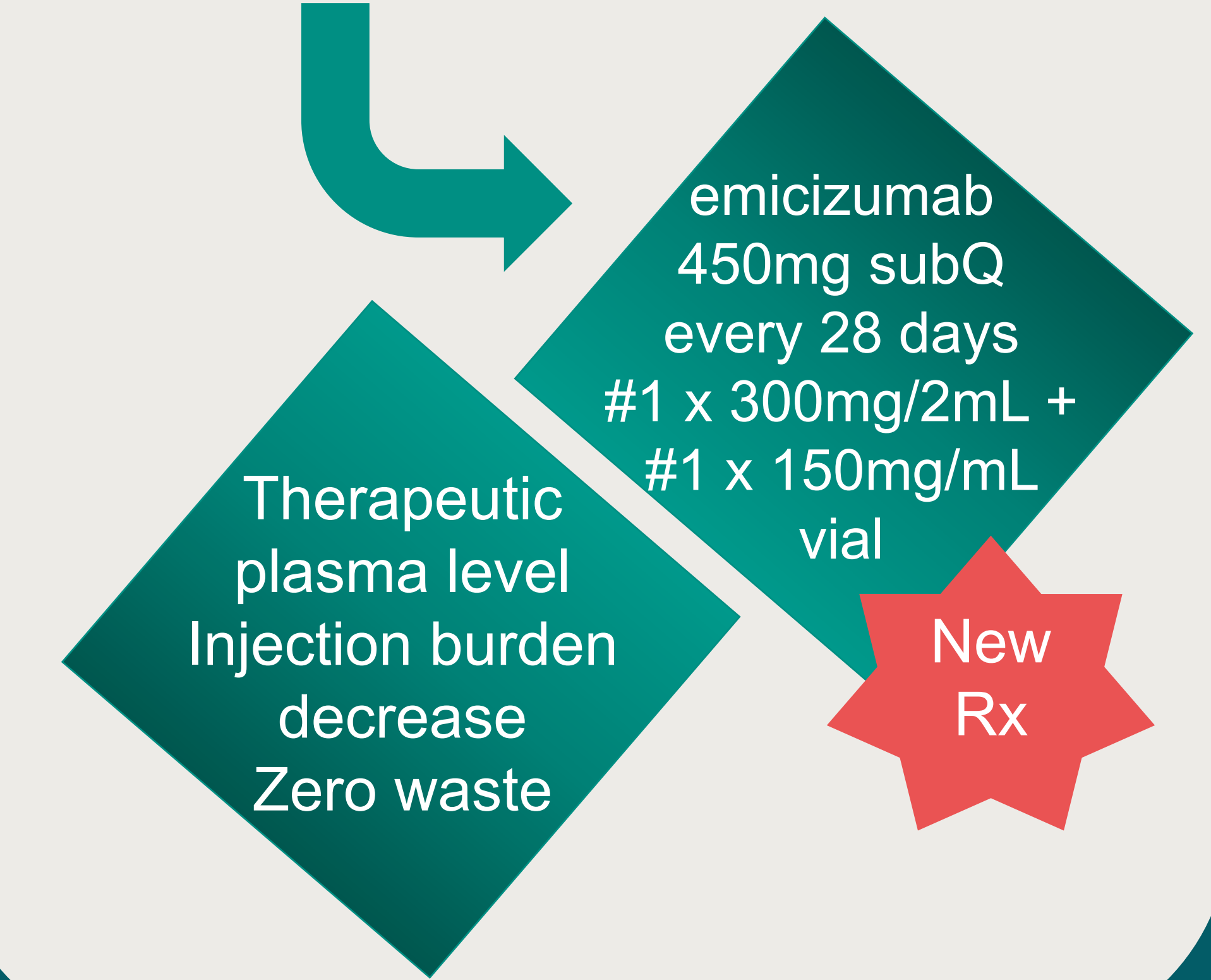
- ☐ Dose combinations
- ☐ Number of injections
- ☐ Number of vials required per dose

Conclusions: Application of the patented Alternate Dose Regimen Identification System by the specialist pharmacist or prescriber can simplify the emicizumab-kxwh regimen, decrease injection burden and reduce or eliminate unnecessary waste.

## CASE SUMMARY



- 111mg every 7 days
- Dispense #2 x 60mg/0.4mL vials per dose (9mg waste)
- 165mg every 10 days.
- Dispense #1 x 60mg/0.4mL + #1 x 105mg/0.7mL vial per dose (zero waste)
- 225mg subQ every 14 days
- Dispense #2 x 60mg/0.4mL + #1 x 105mg/0.7mL vial per dose (zero waste)
- 450mg subQ every 28 days
- Dispense #1 x 150mg/mL + #1 x 300mg/2mL vial per dose (zero waste)



## REFERENCES and DISCLOSURES

D'Albini L, Dorholt M, Gallucci L. Optimizing maintenance dosing of emicizumab-kxwh as prophylaxis in hemophilia A: Dosing to product labeling while minimizing drug waste. *J Manag Care Spec Pharm*. 2023 Jan;29(1):47-57. doi: 10.18553/jmcp.2023.29.1.47. PMID: 36580124; PMCID: PMC10387933.

D'Albini LA, Wright WJ, Phadke S, et al. (2024). Alternative Dose Regimen Identification System. (US Patent No. 12,073,931 B2).

\*Salary, benefits, stock associated with employment at The Cigna Group, the parent company of Accredo