

# Effect of Subcutaneous (SC) Injection of Furosemide Compared with Intravenous (IV) Injection on Vital Signs in Healthy Volunteers

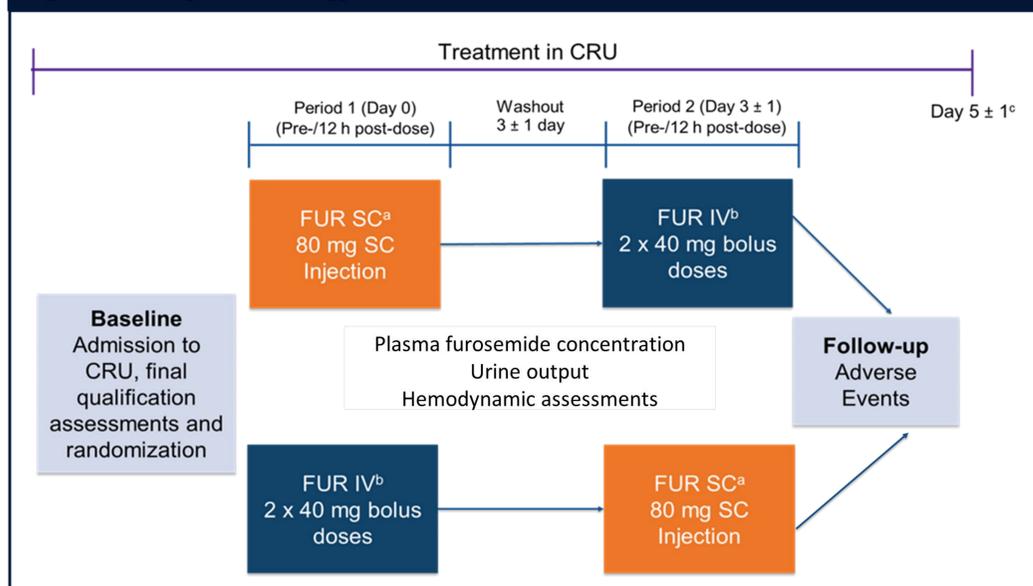
## INTRODUCTION AND OBJECTIVES

- Furoscix 80 mg/10 mL is a buffered formulation of FUR that is self-administered SC via an On-body Infusor over 5 hours and demonstrated similar bioavailability to furosemide IV (FUR IV) with minimal impact on blood pressure (BP) and heart rate (HR).
- SCP-111 (FUR SC) is a novel-formulation of FUR 80 mg/mL currently in development that is administered as an SC injection.
- FUR SC demonstrated 107.3% relative bioavailability to FUR IV [90% CI 103.9, 110.8] with similar urine output (UO) and Na excretion at 6, 8 and 12 hours<sup>1</sup>.
- The purpose of this analysis was to explore the impact of FUR SC on BP and HR.

## METHODS

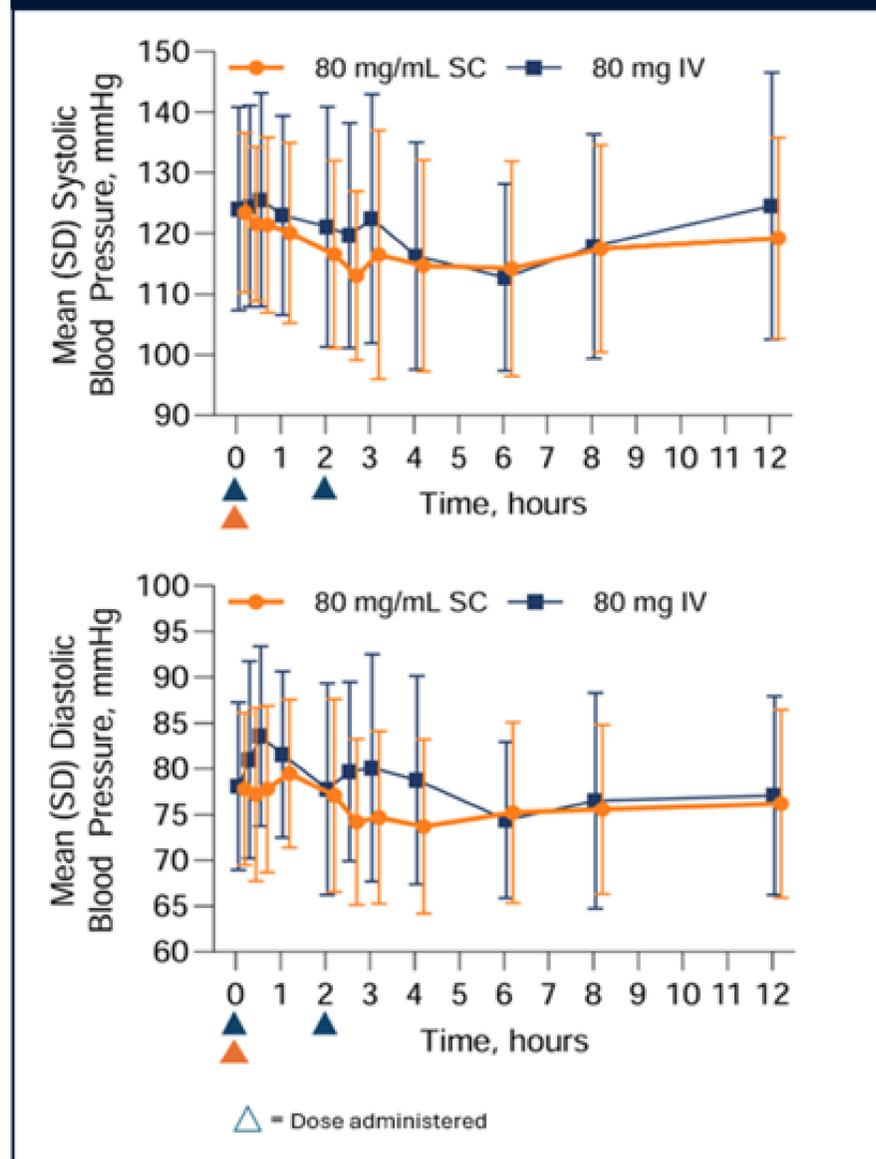
- Post-hoc analysis of open-label, single center, single dose, randomized two-way (two period) crossover study in healthy participants (Figure 1).
- Healthy volunteers randomized 1:1 to receive 80mg FUR IV given as two 40mg boluses separated by two 2 hours first or FUR SC 80 mg/mL SC injection over 10 seconds.
- Systolic BP (SBP), diastolic BP (DBP), and HR were monitored at set time points for 12 hours and changes from baseline were calculated.
- Following a 3-day washout period, participants received the opposite treatment, and the same evaluation was completed.
- Average changes from baseline in SBP, DBP, and HR were estimated using a linear mixed model adjusted for repeated measures and within-subject correlation. The overall change represented the time-averaged treatment effect within the model.

Figure 1. Study Methodology



<sup>a</sup>SCP-111 80 mg SC administered via an autoinjector; <sup>b</sup>Furosemide IV administered as two, 40 mg doses (over 2 minutes) 2 hours apart (80 mg total dose); <sup>c</sup>Follow-up visit should occur 24-48 hours after discharge from CRU for Crossover Period 2; CRU=clinical research unit.

Figure 2. Mean Changes in SBP and DBP with FUR SC and FUR IV

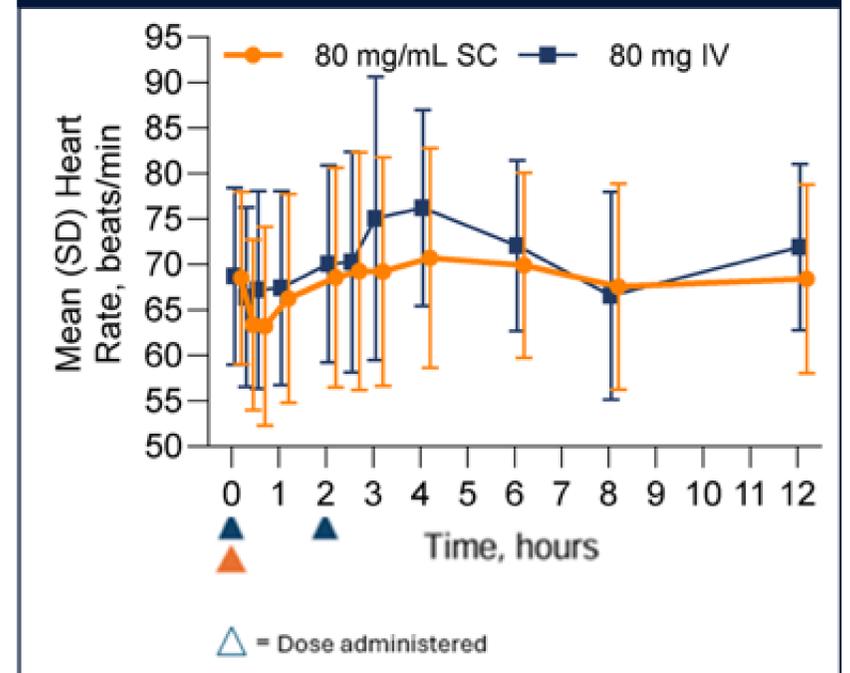


IV, intravenous; SC, subcutaneous; SD, standard deviation.

Table 1. Least Squares Mean Δ in SBP, DBP, and HR from Baseline

Parameter	LS Mean (SE) Overall Δ		FUR IV – FUR SC LS Mean Difference (SE), [95% CI]
	FUR IV	FUR SC	
Systolic BP	-2.6 (2.7)	-6.1 (2.7)	3.5 (0.9), [1.7, 5.3]; p<0.001
Diastolic BP	1.2 (1.4)	-1.7 (1.4)	2.9 (0.6), [1.8, 4.1]; p<0.001
Heart Rate	2.1 (1.2)	-0.9 (1.2)	3.0 (0.7), [1.6, 4.4]; p<0.001

Figure 3. Mean Changes in HR with FUR SC and FUR IV



IV, intravenous;  
SC, subcutaneous;  
SD, standard deviation

## RESULTS

- 21 subjects were available for assessment with FUR SC and 20 with FUR IV.
- 71.4% female; BMI, 27.4 (19.3, 51.4) kg/m<sup>2</sup>; eGFR, 79 (56, 138) mL/min/1.73 m<sup>2</sup>.
- Mean ± SD baseline SBP and DBP for the FUR SC and FUR IV groups were 123±13/78±8 vs. 124±17/78±9 mmHg. Figure 2 displays changes in SBP and DBP following FUR SC or FUR IV administration.
- Mean ± SD baseline HR was 69±9 and 69±10 bpm for FUR SC and FUR IV, respectively. Figure 3 displays changes in HR following FUR SC or FUR IV.
- Overall LS mean (SE) changes in SBP, DBP, and HR from baseline across the 12-hour period are listed in Table 1.
- One subject experienced dizziness and hypotension in FUR IV group, both AEs were mild and resolved.
- No subjects in the FUR SC group had relevant adverse events.

## SUMMARY AND CONCLUSIONS

Although decreases in SBP, DBP, and HR were statistically greater with FUR SC than FUR IV, neither FUR SC nor FUR IV administration resulted in a clinically relevant impact on hemodynamics in healthy volunteers.