Introduction:
Here, we present first interim results on the real-life use of IV fosfomycin in a subgroup of critically ill patients with IE.

Methods:
Prospective, non-interventional and monitored European multicenter study (FORTRESS; NCT02979951). The primary objective is clinical success, defined as clinical cure or improvement incl. microbiological cure at end of fosfomycin treatment (EOT). Secondary objectives are microbiological cure, clinical evaluations at different time points, and safety.

Results:
Currently (01 2020), 245 patients with severe infections have been enrolled, thereof 14 patients with IE (3 female, 11 male, mean age 64y). Thirteen patients with IE (93%) were treated in intensive care and 7 (50%) had sepsis or septic shock at baseline. Mean APACHE II score at baseline was 21. Seven (50%) patients had a prosthetic valve associated IE, one (7%) had a cardiac device associated IE, and two (14%) had both. Eleven (79%) IE were left-sided, one (7%) right-sided, and two (14%) were both-sided. Five patients had concomitant severe embolic complications, thereof two patients with stroke. Imaging results showed vegetation in 13 (93%) cases and abscess formation in one (7%) case. Twelve (86%) cases of IE were microbiologically confirmed. Causative pathogens were mostly staphylococci (12/14 (86%) patients), particularly MSSA (6/14 (43%) patients) and CoNS (4/14 (29%) patients). IV fosfomycin was used with a daily dose of 15 g/day (median) for a mean duration of 17 days and in combination therapy, particularly with beta-lactams, vancomycin or daptomycin. Clinical success was reported in 11/14 (79%) patients, thereof in 4/4 patients without foreign body involvement and in 7/10 (70%) patients with foreign body associated IE. All 14 patients were microbiologically cured at EOT. Four (29%) patients had adverse drug reactions.

Conclusion:
These new insights from daily clinical practice suggest that IV fosfomycin is a valuable combination partner for the treatment of IE even in cases of foreign body involvement.