Introduction:
When veno-arterial extra-corporeal membrane oxygenation (VA-ECMO) support can be terminated, arteriotomy wounds of the patients of are traditionally closed by open repair in the operation theaters. Lots of manpower are involved and timeslots in operating theaters are scarce. Transport of the critically-ill is risky. Successful VA-ECMO decannulation using percutaneous device called ProGlide has been reported and our group had adopted and modified this approach.(1)

Methods:
This is a retrospective study analyzing the one-year experience of bedside VA-ECMO decannulation. Our institution is a 23-bed tertiary ECMO referral center in Hong Kong. Our first bedside decannulation was performed in November 2018, and since then, this practice had replaced the traditional open repair, unless contraindicated. Data from November 2018 to October 2019 were analyzed.

Results:
In the study period, 39 patients received VA-ECMO. 28 survived to decannulation and 25 received bedside percutaneous decannulation. Their median age was 59 (52-67). The default arterial catheter size was 17Fr, with 15 Fr in 3 cases and 19Fr in one. Five (20%) failed percutaneous closure and they were subsequently surgically repaired without additional complications. Among the 20 successful cases, 2 ProGlides were used in 15 cases and 3 used in 5 cases. The procedure time was 27 minutes (15-45), which was faster than 2.5 hours by open repair. Median blood loss was 300mL (250-400). Post procedural clinical and ultrasound Doppler examination revealed minor complications in 4 patients, including 2 arterial clots and one pseudoaneurysm who were managed conservatively and one wound infection requiring exploration. There were no other major vascular complications.

Conclusion:
Bedside percutaneous VA-ECMO decannulation is safe and effective.

References: