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**Title:** Extracorporeal membrane oxygenation in awake patients as bridge to lung transplantation

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**Body:** Endotracheal intubation in patients with end-stage lung disease before lung transplantation (LuTx) is associated with a poor outcome. New bridging strategies of critical candidates are of major interest. We performed a retrospective, single-center, intention-to-treat analysis of consecutive LuTx candidates with terminal respiratory or cardiopulmonary failure receiving “awake ECMO” support. The outcomes were compared with a historical control group with conventional mechanical ventilation (MV group). Twenty-six patients (58% female, median age 44 years, range 23-62) were included in the awake ECMO group and thirty-four patients (59% female, median age 36 years, range 18-59) in the MV group. The duration of ECMO support or mechanical ventilation, respectively, was comparable in both groups (awake ECMO: median 9 days; MV: median 15 days; p=0.25). Six of 26 (23%) patients in the awake ECMO group and 10/34 (29%) patients in the MV group died before a donor organ was available (p=0.20). Survival at 6 months after Tx was 80% in the awake ECMO group versus 50% in the MV group (p=0.02).

Patients in the awake ECMO group required shorter postoperative mechanical ventilation (p=0.04) and showed a trend towards a shorter postoperative hospital stay (p=0.06). Extracorporeal membrane oxygenation (ECMO) support in awake and non-ventilated patients is a new and promising strategy for bridging patients to LuTx.