Conclusion
At Skåne University Hospital, during 2013-2017, 30 patients were emergency thoracotomized due to trauma.
Data was retrieved from SweTrau.
Total survival was 36%. Adequate systolic blood pressure on arrival and even any signs of life are determinantal factors for survival.

Introduction
The local rise of gunshot violence in the past few years has resulted in an increase of penetrating trauma and resuscitate procedures such as emergency thoracotomy (ET). We have studied trauma patients having undergone ET for resuscitative purpose, reviewed patient characteristics, indications and factors of survival.

Methods
All trauma patients thoracotomized for resuscitative purpose after trauma between Sep 2013 and Sep 2017 at Skåne University Hospitals in Lund & Malmö were retrospectively retrieved from SweTrau. Thirty patients met the criteria. For statistics Mann–Whitney U test was used and p<0.05 was considered significant.

Results
Among the thirty patients included, survivors were 36.7% (n = 11) and non-survivors 63.3% (n = 19). One female was found in each group. Age [36y (15-77) vs. 25y (18-78)] did not differ.

Non-survivors had absence of signs of life (SOL) pre-hospital (n = 15) or on arrival to the ED (n = 4). Amongst the survivors only one patient had pre-hospital absence of SOL and two patients had absence of SOL in the ED.

The survivors had a higher SBP systolic blood pressure (median = 100 mmHg) than the non-survivors (median = 0 mmHg) with p<0.0001. Seven surviving patients had penetrating thoracic trauma and 4 patients blunt trauma (n.s.).

Most of the non-survivors had emergency thoracotomy (ET) because of absence of SOL (n = 14), compared to survivors who had ET for deteriorating vital signs (n = 8). Other indications are listed in the separate table. There was a strong correlation between survival and if the patient made it into the operation theater (p = 0.0002).

Fig. Analysis of type of injury, signs of life and survival and adding the mutual results published by the Eastern Association of Surgery of Trauma1.

Discussion
Patients with present SOL or witnessed loss of SOL were more likely to survive as were those that were stable enough to be thoracotomized in the operation theater. In analogy, proper systolic blood pressure increased likelihood of survival.

As seen in the figure above, with humble knowledge of possible selection bias, the presented data are in alignment with those presented by Eastern Association of Surgery of Trauma.

In a modern European setting2, blunt trauma managed by ET has been shown better outcome than previously reported showing a survival of 25.6% comparable to 36.4% in this study.

Limitations of the present study is the small number of patients. Late or unavailable forensic reports makes comparison of ISS scores of survivors and non-survivors troublesome. The importance of meticulous registration in SweTrau must be stressed. A national study including forensic reports is mandated.

References