Introduction:
The aim of this preliminary analysis is to detect differences between the qualitative and quantitative evaluation of the pupillary function carried out by doctors and nurses of an Intensive Care Unit (ICU) of a tertiary level hospital. Secondary purpose is to investigate new indications for the use of pupillometry in a population admitted in ICU.

Methods:
The study has been conducted (currently in progress) at the Intensive Care Unit and ECMO Referral Center at Careggi Teaching Hospital (Florence; Italy).
The enrolled patients are adult subjects (> 18 years) with alteration of consciousness defined by a Glasgow Coma Scale (GCS) < 9, following a primary brain injury and/or the use of sedative drugs.
The studied parameters, obtained with NeuroLight pupillometer ® (ID-Med, Marseille, France) are analyzed, integrated and matched with clinical evaluations, biochemical laboratory test and neurophysiological investigations according to internal protocols.

Results:
Visual/qualitative evaluation of the pupil function shows a lower reliability if compared to automated pupillometry. The estimated error in the proper determination of photomotor reflex is 34,9% (p< 0,01). No significant difference is reported between quantitative and qualitative pupillometry in the detection of anisocoria.

Conclusion:
Our preliminary results are compatible with previously reported data, even if there was no difference in anisocoria determination. Interestingly, a longer latency period among patients treated with opioids has been observed. Other results are still in progress.

References:
1. Morelli Pet Al. Role of automated pupillometry in critical ill patients, Minerva Anestesiol 2019