Abstract:

Purpose: Appropriate tip position of totally implantable central venous catheters is essential in order to prevent catheter-related complications, in particular thrombosis. Endovascular electrocardiography is an economic and safe method to guide placement of catheters into the central veins. Although widely utilized, there is still lack of conclusive evidence about its efficacy. The aim of the study was to assess the efficacy and safety of endovascular electrocardiographic guided placement compared to the anthropometric method.

Methods: Endovascular ECG was employed to guide electrocardiographic placement of a central venous catheter in a cohort of oncologic patients. The rate of correct placement and the incidence of catheter-related thrombosis were considered. Patients in which central venous catheters were inserted with the anthropometric technique were considered as control group.

Results: The rate of correct placement was 91% and 50% for ECG-guided and anthropometric catheters (p

Conclusion: Endovascular electrocardiography was more effective than the anthropometric
technique in placement of implantable central venous catheters and was associated with a lower incidence of catheter-related thrombosis, in particular for those inserted from the left side.