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Background

- Tunnelisation of peripherally inserted central catheters (PICCs) offers several advantages, such as the possibility of placing an exit site of the catheter to the ZIM “green zone” no matter where the puncture site is, and a relatively long subcutaneous route, which should provide protection from infections.
- Choosing the correct site of PICC implantation also seems to play an important role in preventing periprocedural complications related to catheter insertion.

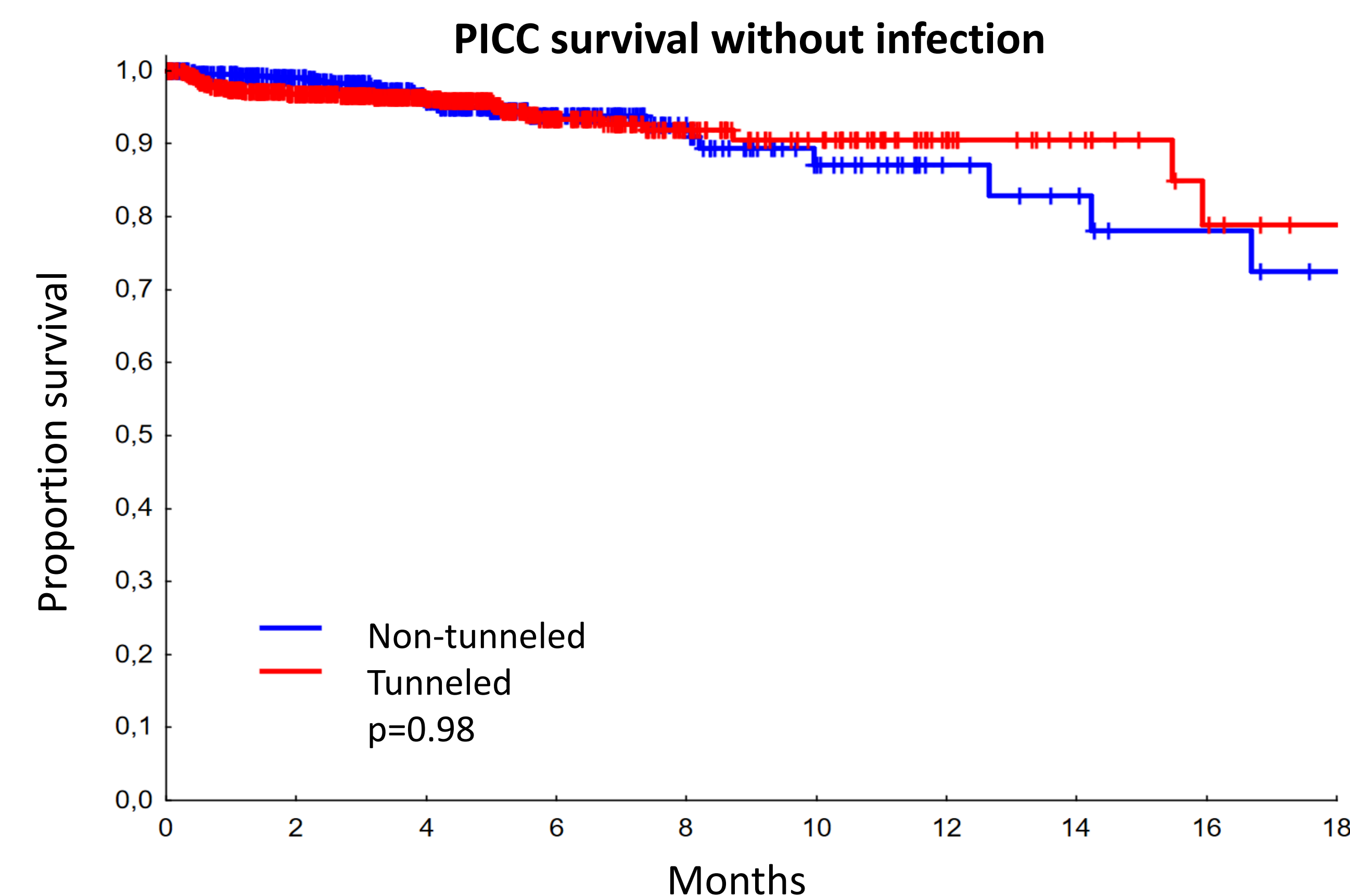
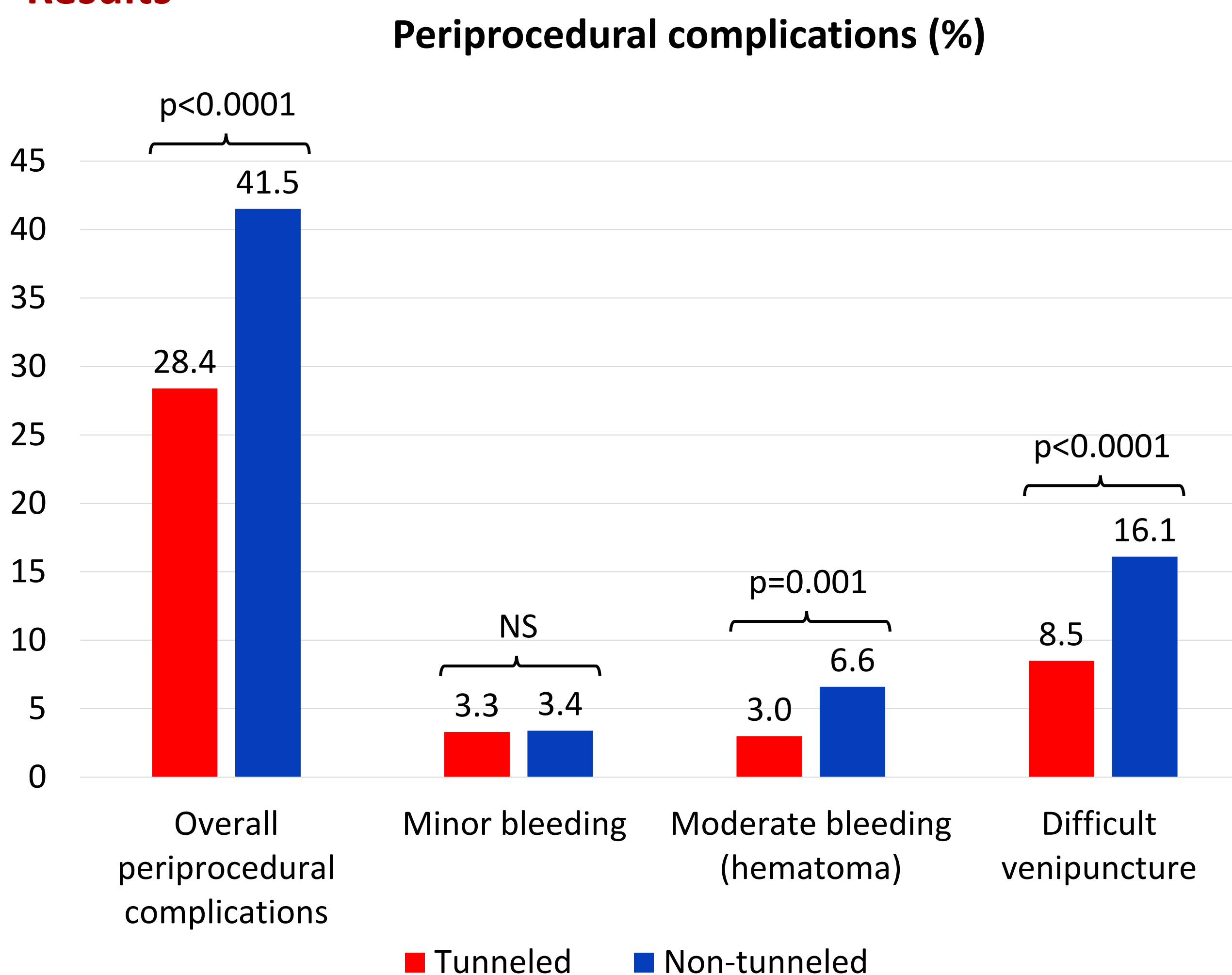
Objectives and methods

- This single-center retrospective analysis sought to evaluate the impact of subcutaneous tunneling on safety and incidence of periprocedural complications related to PICC insertion during a 5-year period at major hematological/oncological center in the Czech Republic.

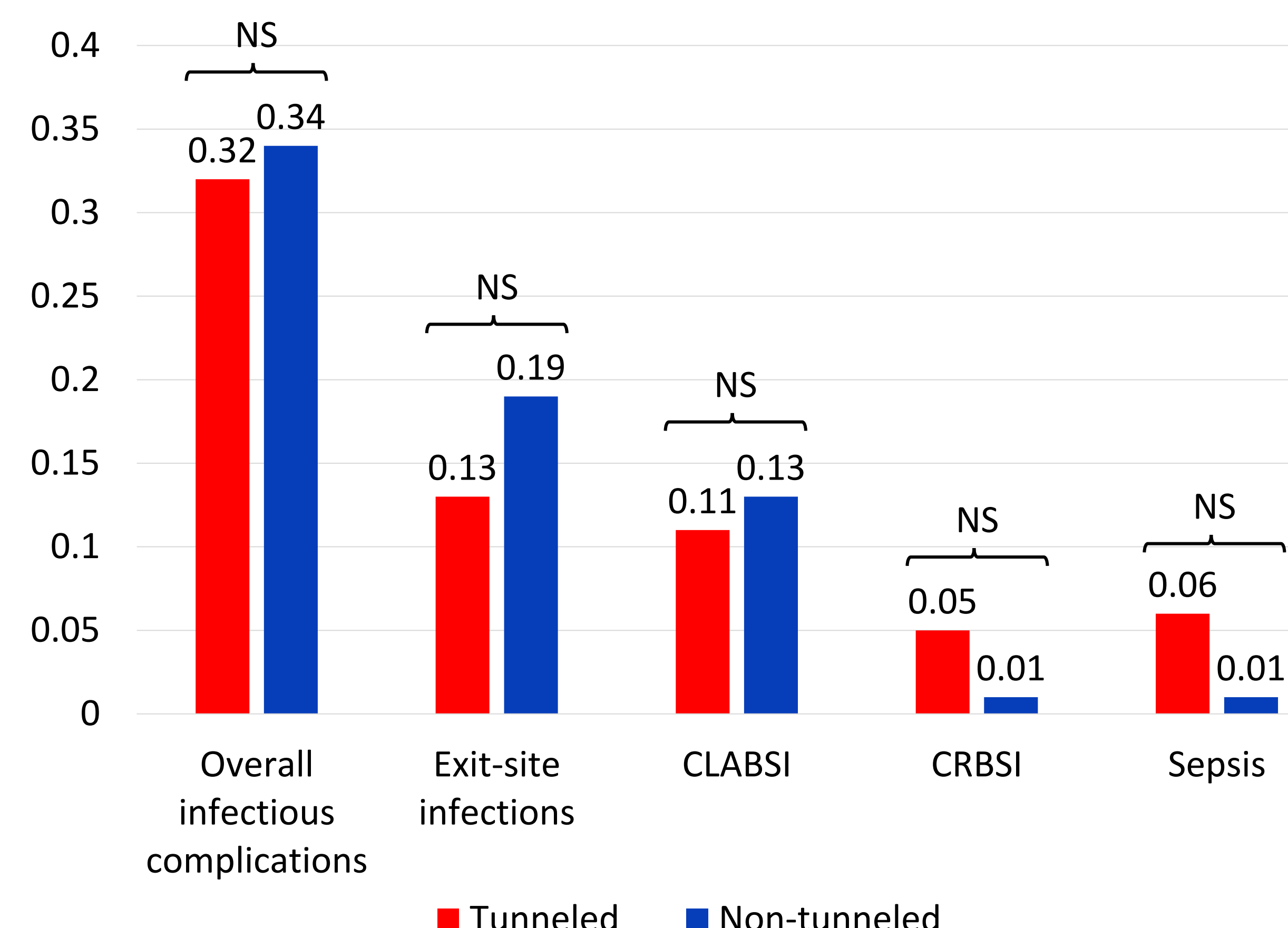
Results

- From 2019 to 2023, we implanted **1420** PICCs, of which **948** were tunneled PICCs with overall dwell-time of **106.168** catheter-days, and **472** were non-tunneled PICCs with overall dwell-time of **69.880** catheter-days.
- Both groups were similar regarding the diagnosis composition.
- In graphs, we present comparison of periprocedural complications, systemic and local infectious complications in patients with tunneled vs. non-tunneled PICCs.

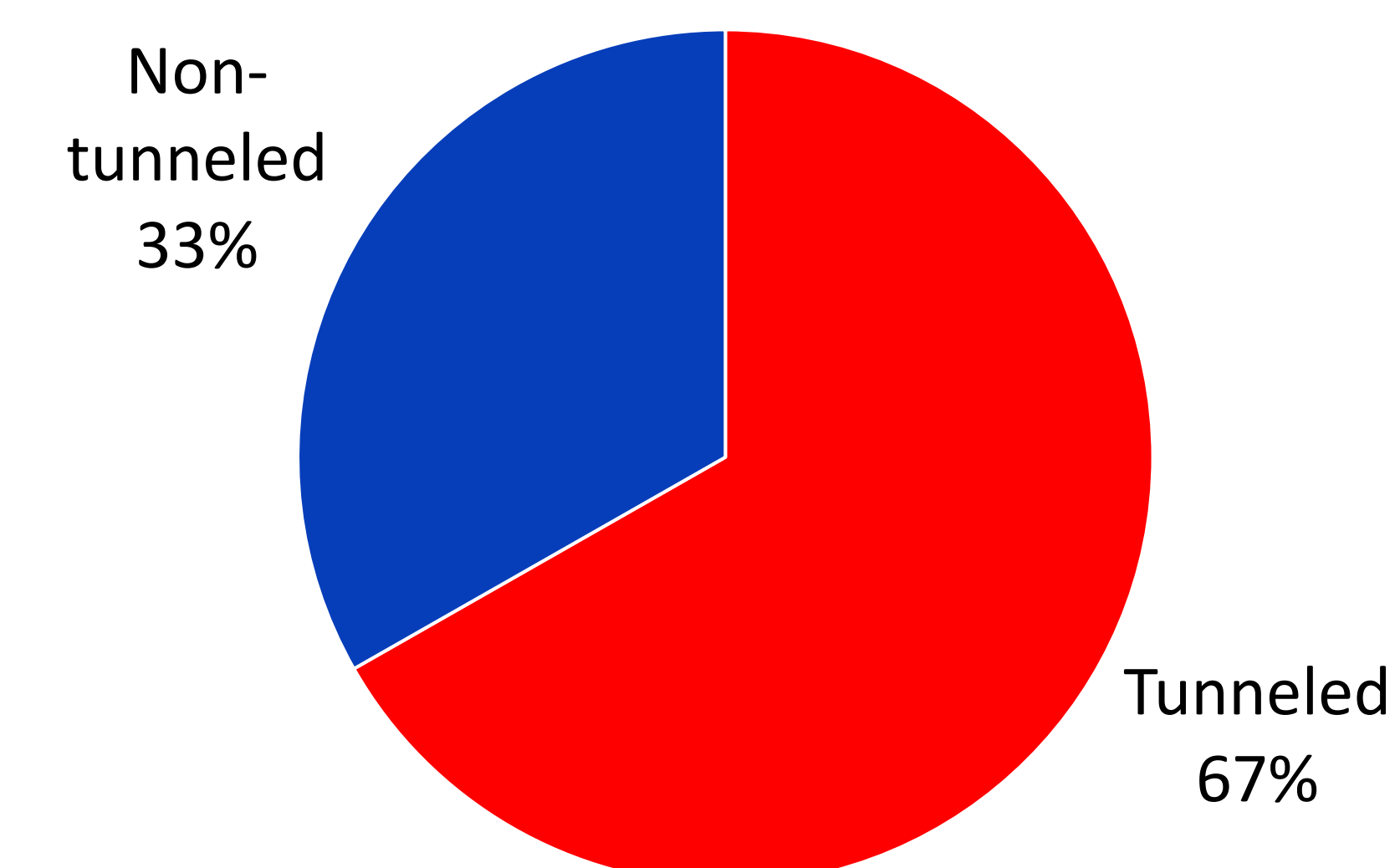
Results



Infectious complications (per 1000 catheter-days)



Method of PICC insertion



Conclusions

- Our retrospective analysis supports the efficacy of PICC subcutaneous tunneling technique in **reducing periprocedural complications** such as moderate bleeding and repeated venipunctures but **does not support a decrease in infection rate**.
- Our findings support a rationale of this method in providing a reliable and functioning vascular access to patients while reducing catheter-related complications.

References

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