

A European Perspective on Vascular Access Management



The EDTNA (Europe)
Collaborative Research Project
The ORPADT (Belgium)
Peer Review project

Project Co-ordinators
Jean-Pierre Van Waeleghem
Monique Elseviers
Antwerp University Hospital, Belgium

ORPADT Flanders and Wallonia

Organisatie van Paramedici der Dialyse en Transplantatie centra
Organisation des Paramédicaux des centres de Dialyse et de Transplantation

Peer review 1999-2003

Vascular Access in Hemodialysis:

Coordinator: J.P. Van Waelegheem, B. Theelen

Statistics and lay-out: M. Elseviers

Participating centres

EDTNA Project

▪Part 1

103 centres
treating 13 803 patients

▪Part 2

47 centres with random
selection of 1380 patients

ORPADT Project

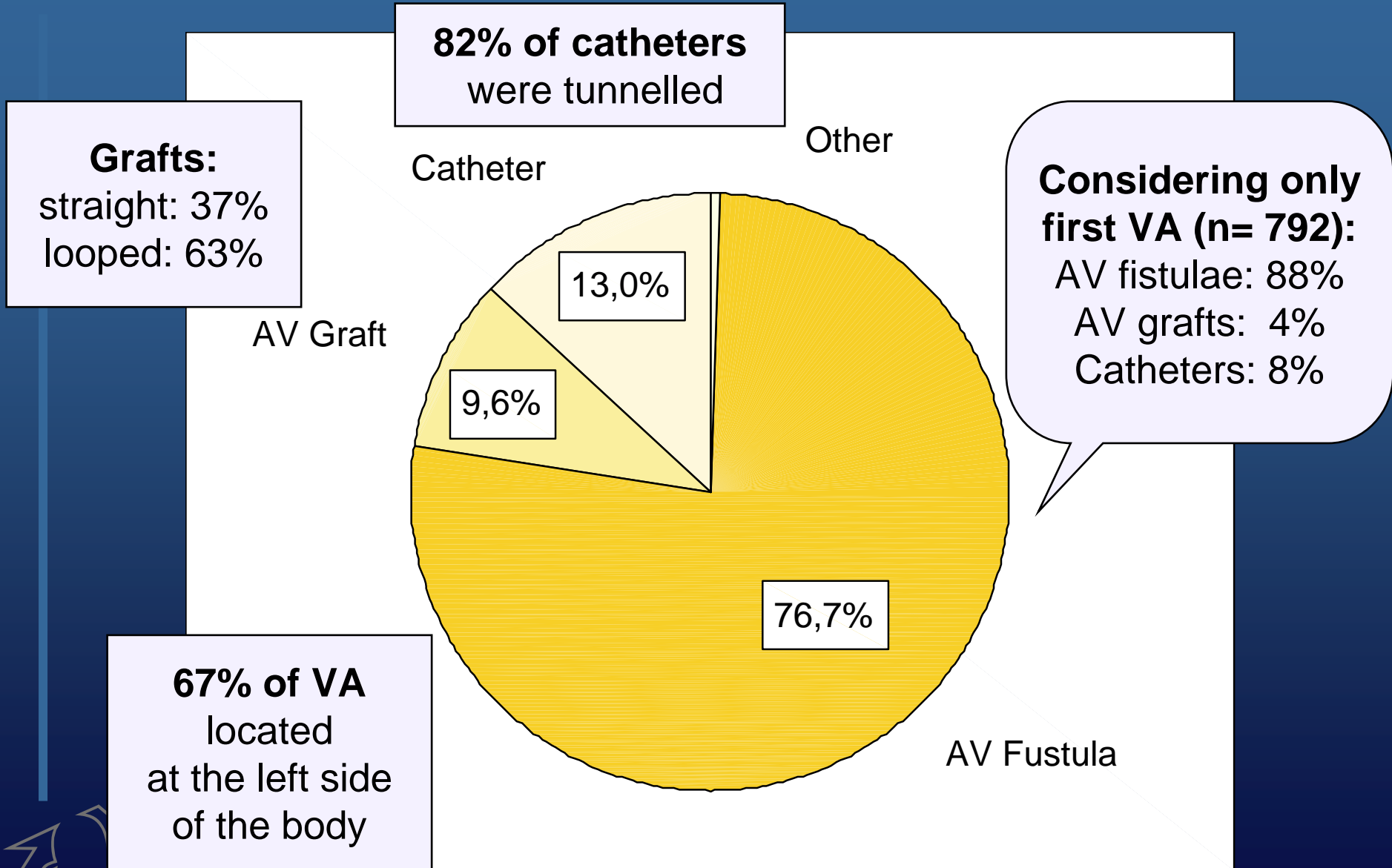
▪Part 1

59 centres
treating 3030 patients

▪Part 3

30 centres
treating 2567 patients

Vascular Access Day 1



Complications

Other:
pain
hematoma
high cardiac
output

other

stealsyndrome

aneurisma

high VP

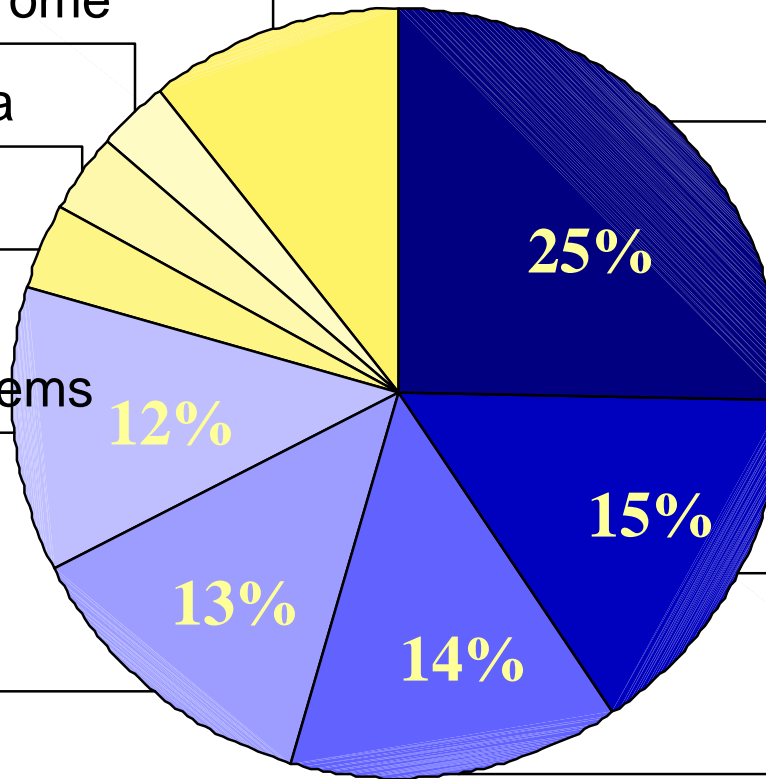
flow problems

bleeding

thrombosis

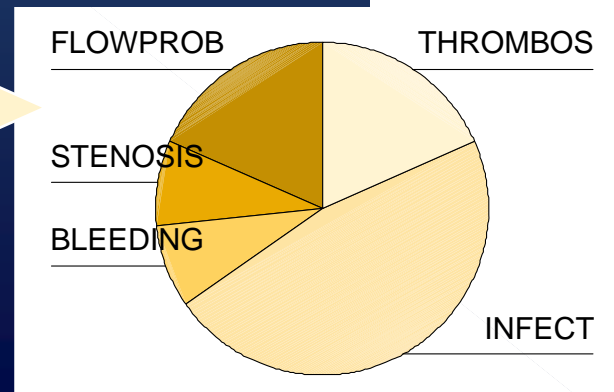
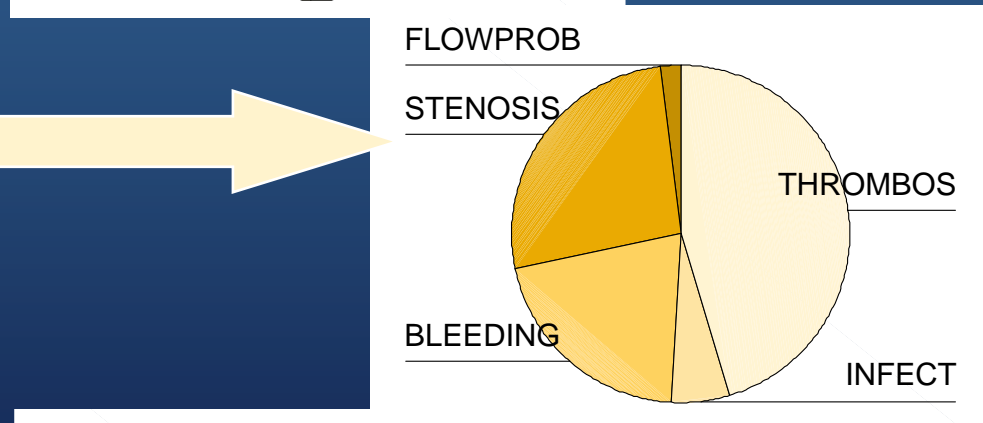
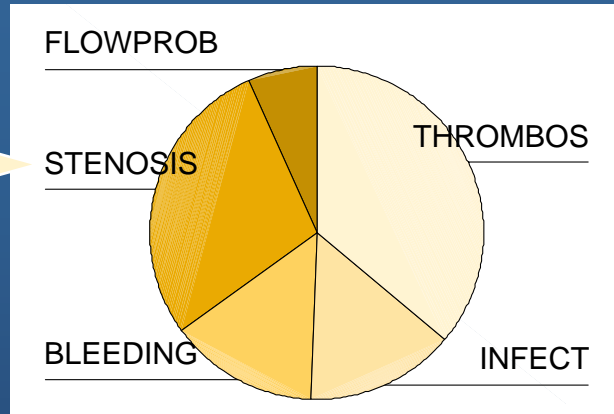
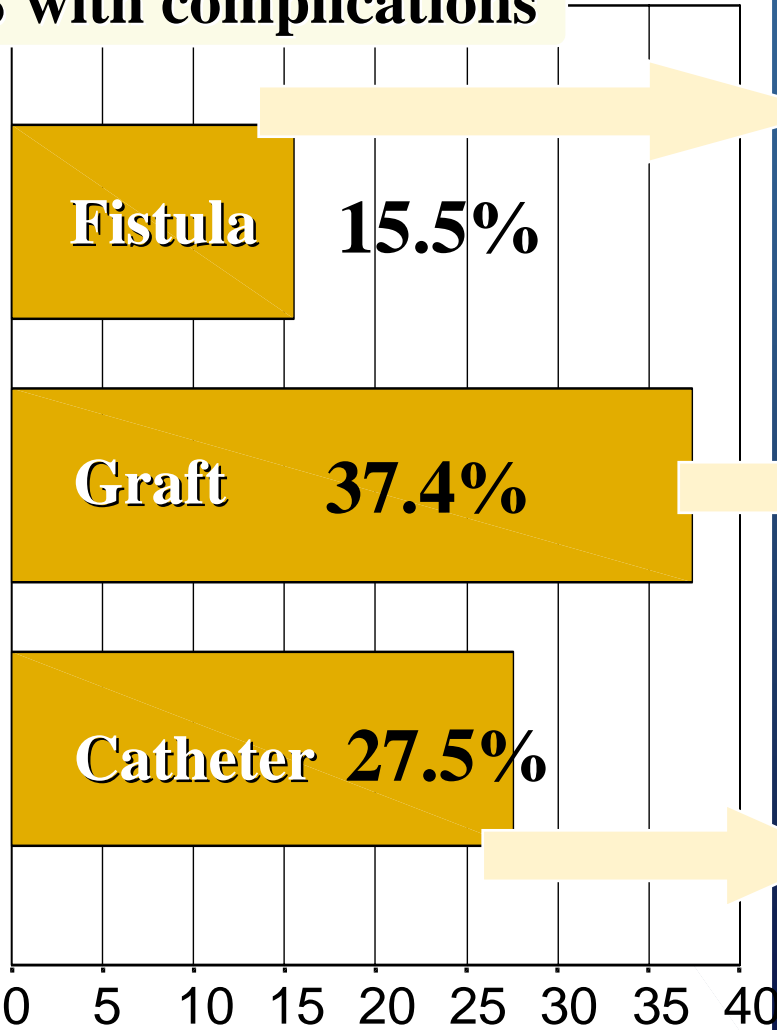
stenosis

infection



Type of VA and complications

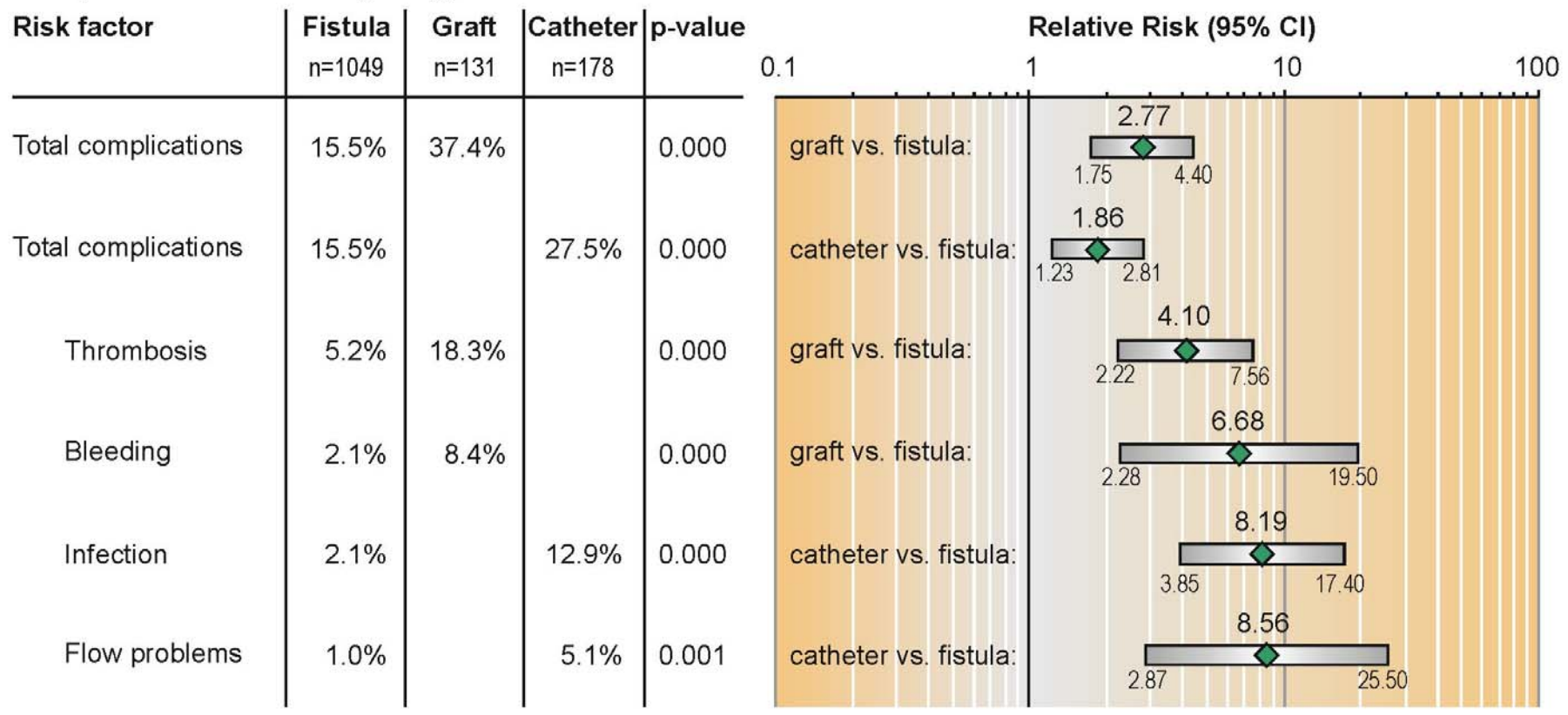
% with complications



Risk for complications according to type of VA

The risk of having a complication almost doubled for patients with catheters and tripled for patients with grafts compared to patients with AV fistulae

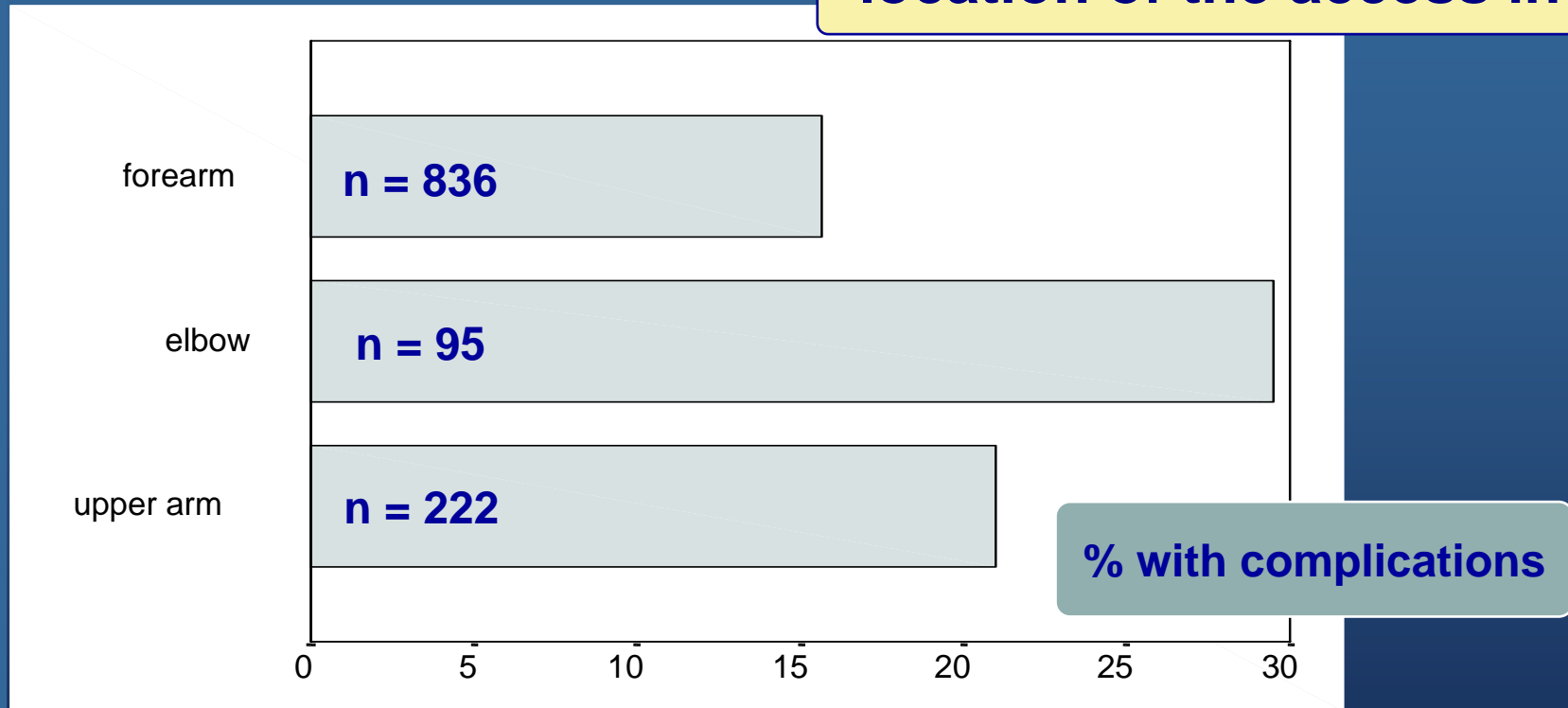
Complications according to type of vascular access



Relative risks are controlled for patient/nurse ratio and the number of previous VA

Fistulae/grfts : Complications

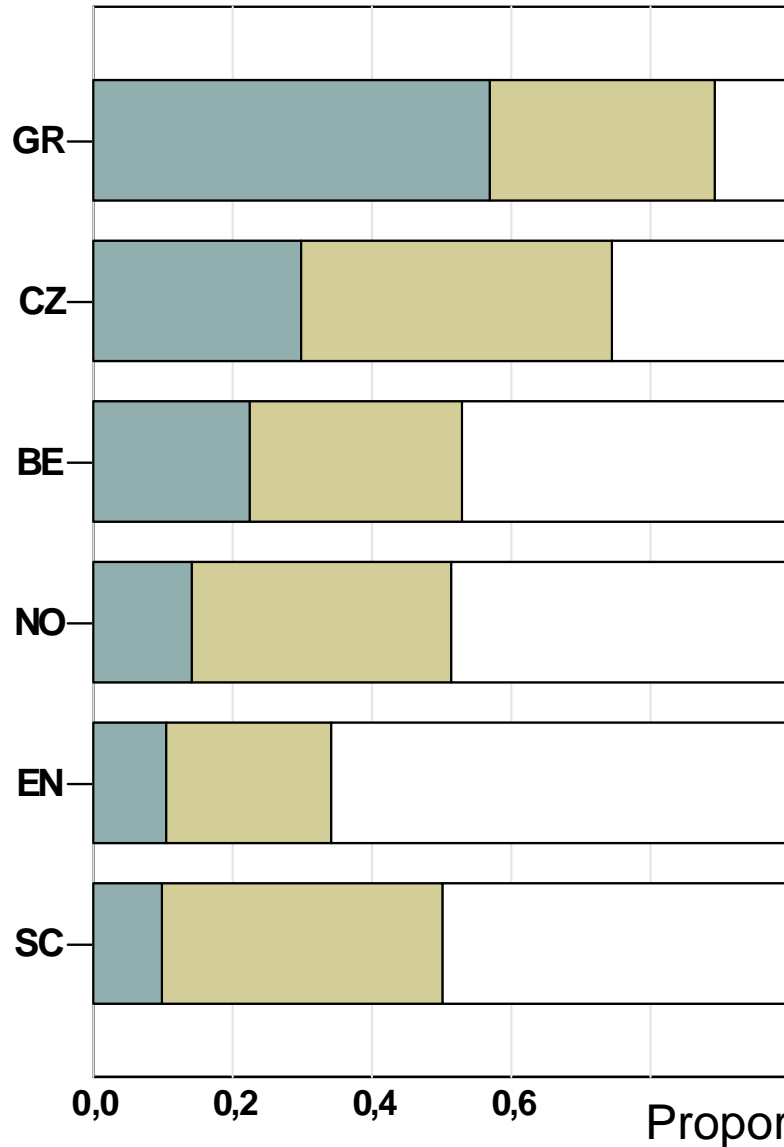
location of the access in use



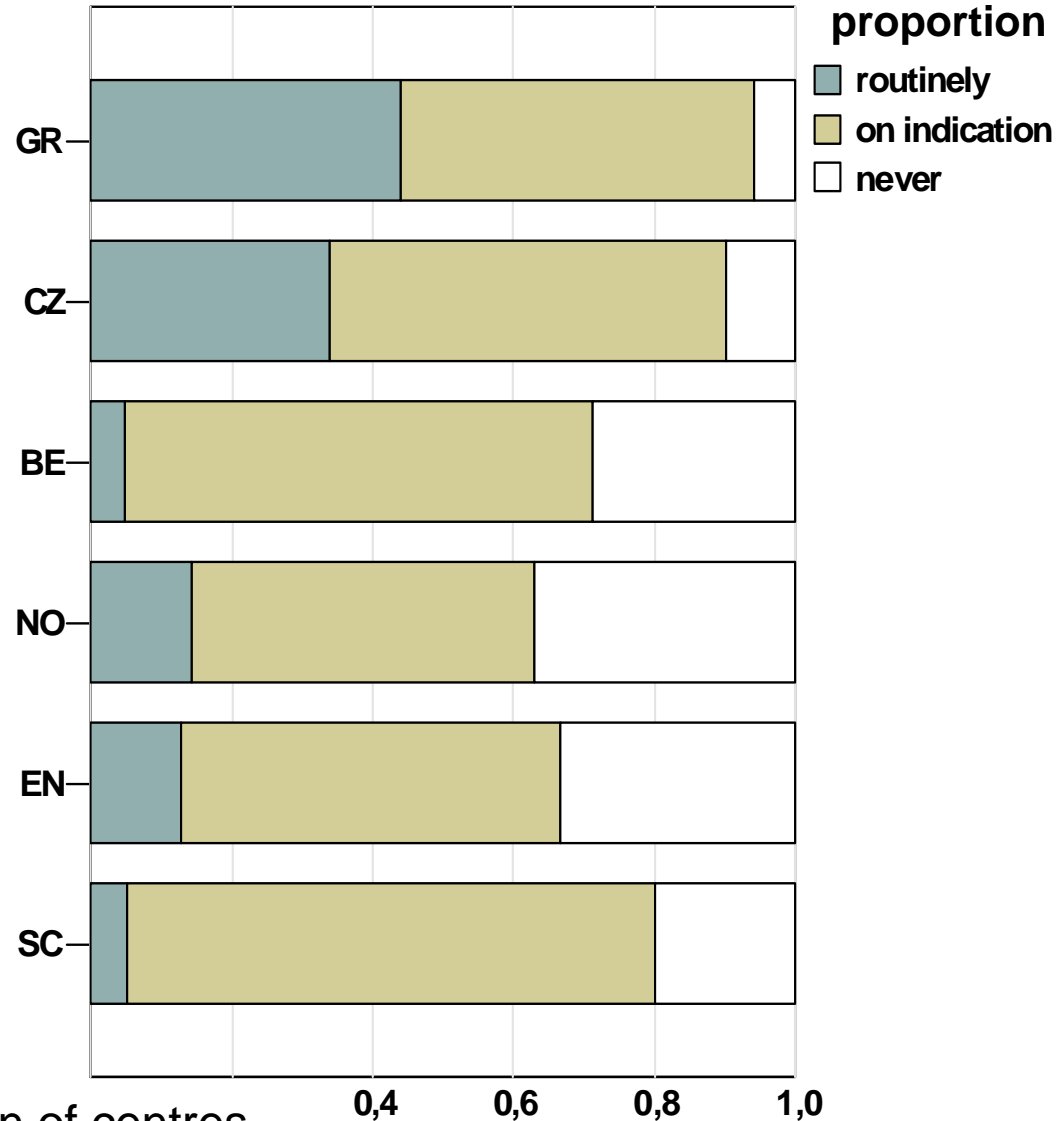
	forearm %	elbow %	upper arm %
thrombosis	6.0	9.5	8.1
infection	1.8	6.3	0.9
bleeding	2.4	3.2	3.6
stenosis	4.1	9.5	5.4
flow problems	0.7	4.2	0.5

Testing the functionality of AV fistulae

Access flow measurement

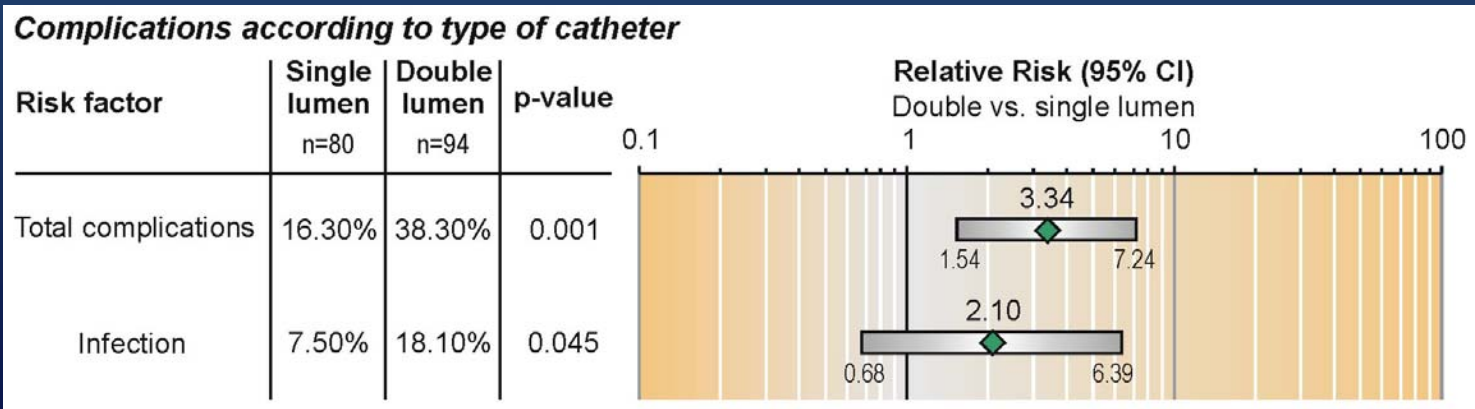
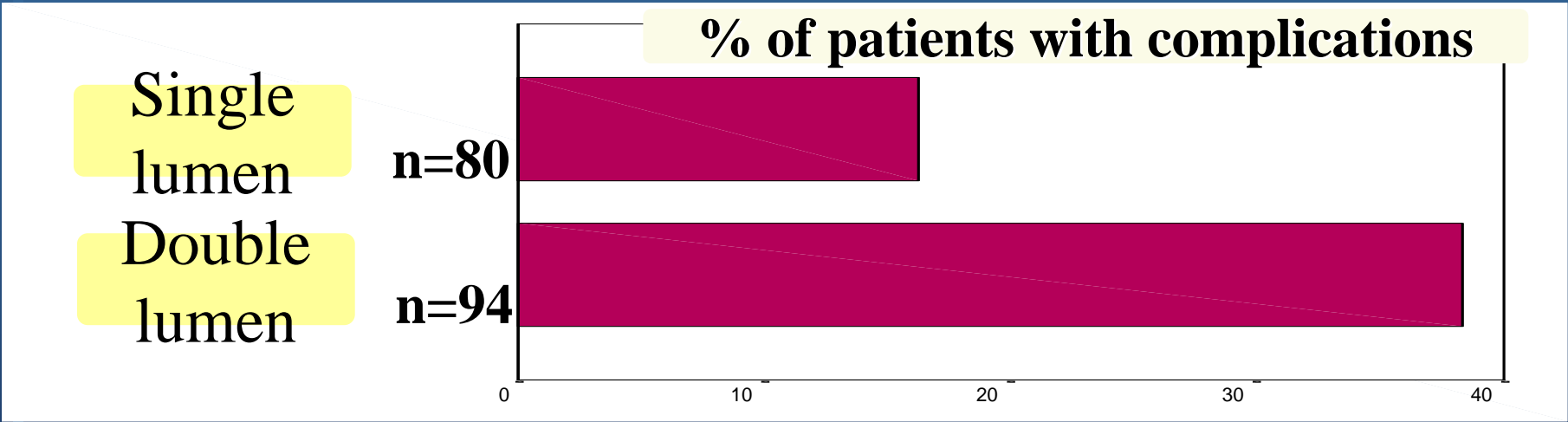


Access recirculation measurements

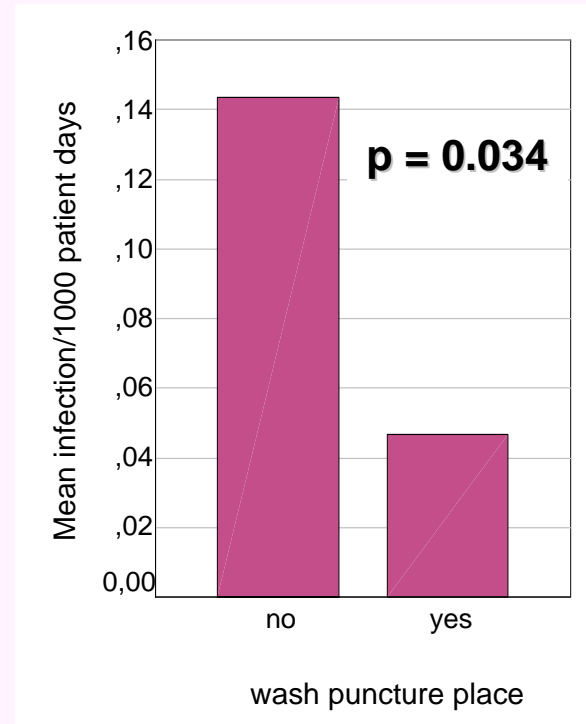
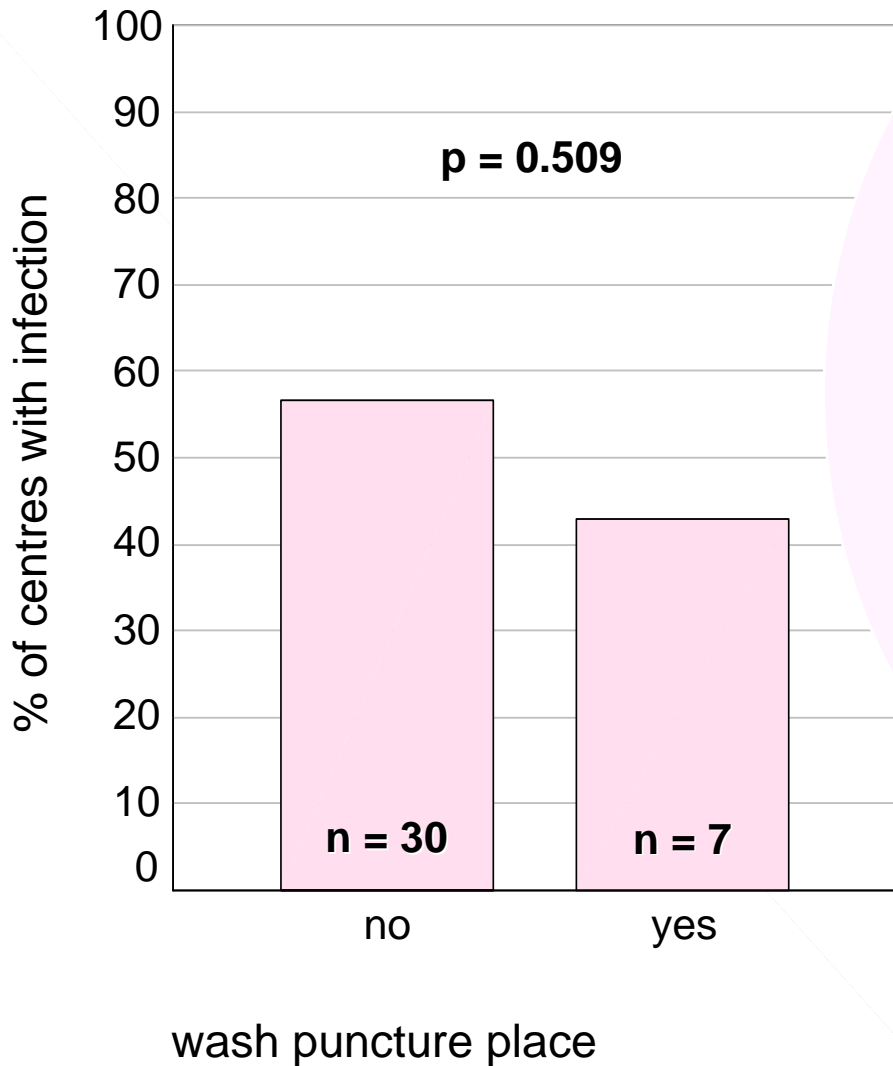


Catheters: Complications

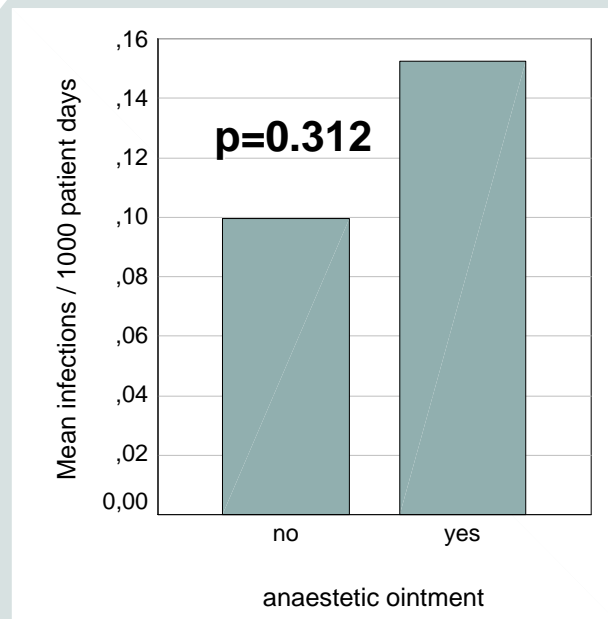
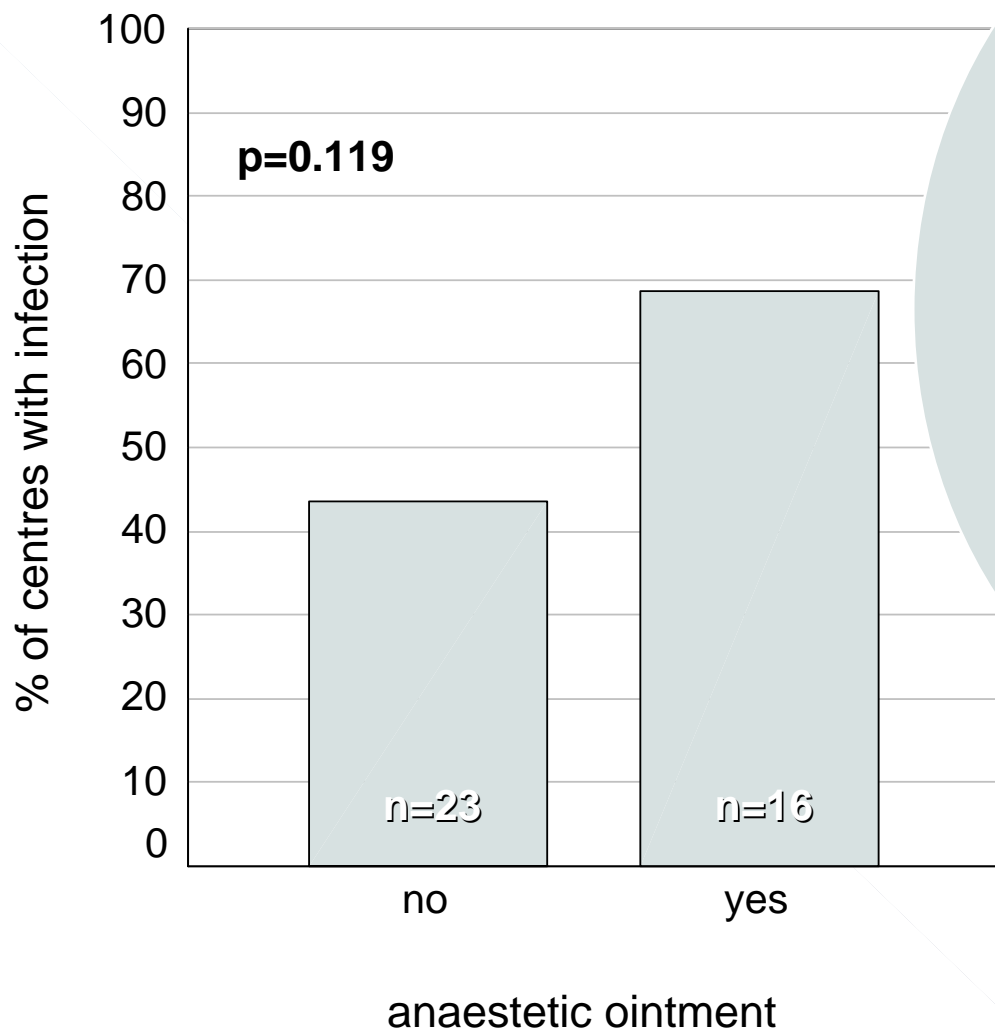
type of catheter



Fistulae/grfts: Washing puncture place before connection



Fistulae/grafts: use of anaesthetic ointment

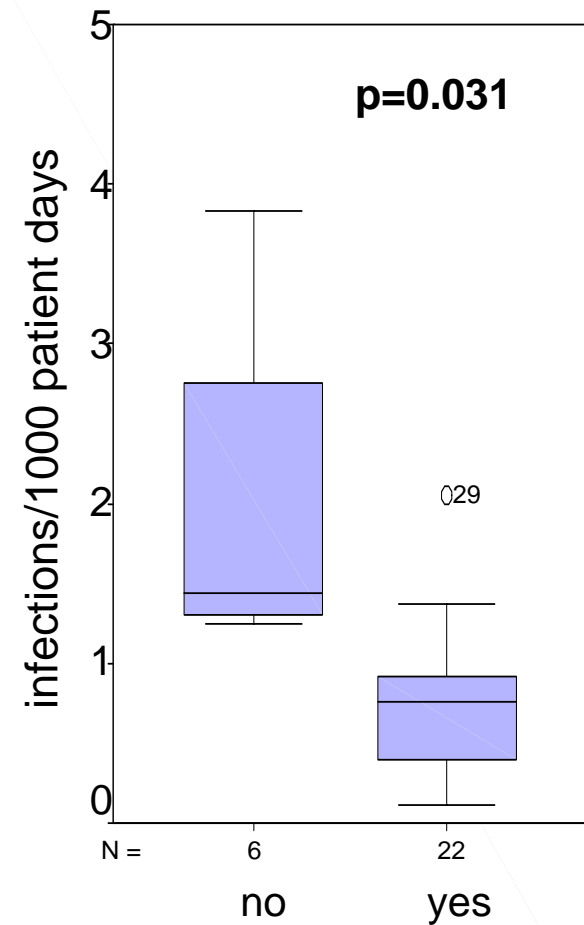


**! If anaesthetic ointment:
Wash puncture place:**

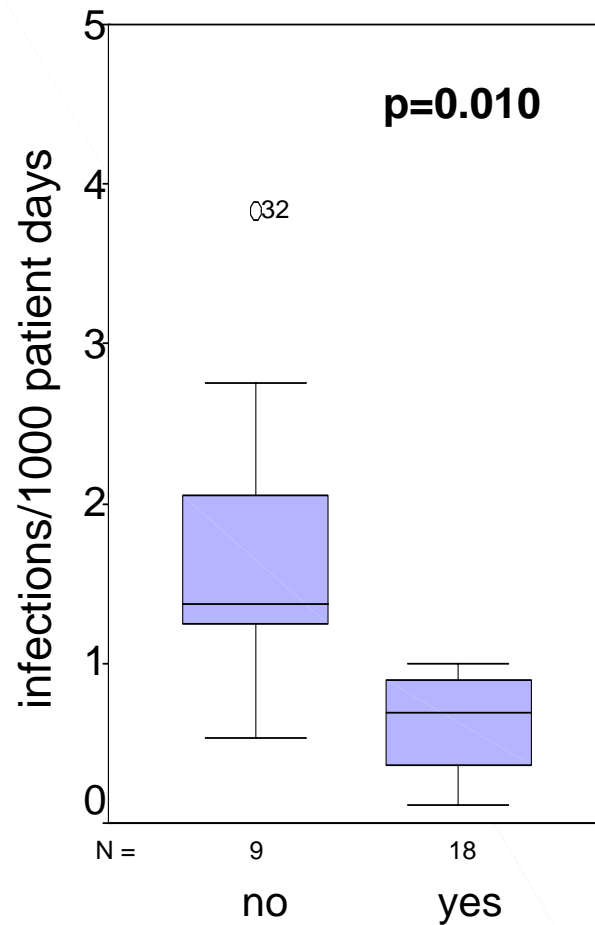
YES (n=3): Mean infection rate: 0.04

NO (n=13): Mean infection rate: 0.18
($p=0.251$)

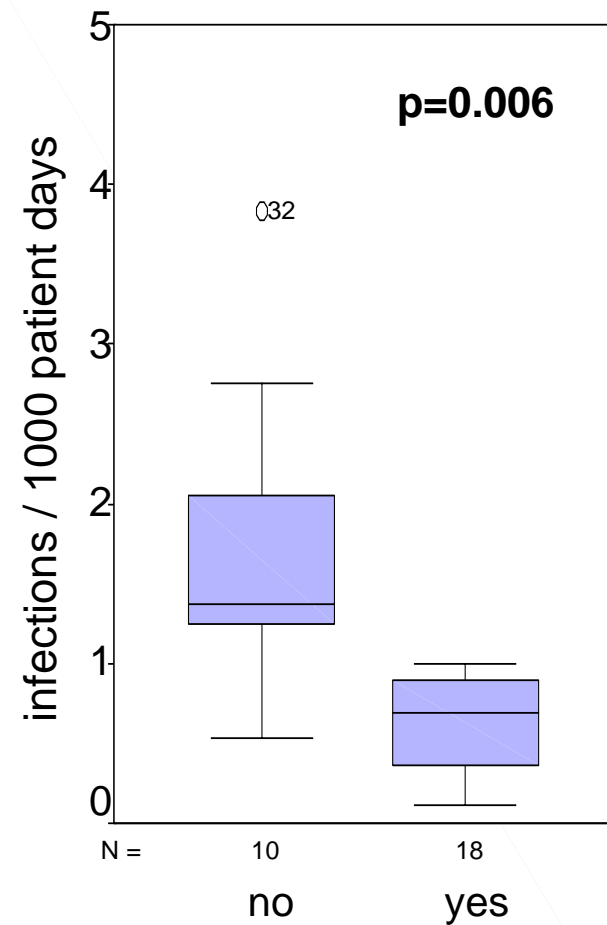
Catheters: Nose-mouth protection



nurses used



patients used



All used