

EFFECT OF 2MG INTRAVENOUS PHYTONADIONE TREATMENT ON INTERNATIONAL NORMALISED RATIO IN THE HOSPITALISED ADULT

N. RAMON, M. ROSADO ANCIN, A. SANTAOLALLA SÁNCHEZ, C. VALDAZO MARTÍN, A. LARRABEITI ECHEVARRIA, J.J. GARCÍA ALBÁS, R. HERNANZ CHAVES, C. MARTÍNEZ MARTÍNEZ
HUA, SERVICE OF PHARMACY, VITORIA-GASTEIZ, SPAIN

BACKGROUND

Phytonadione is widely used in patients with elevated International Normalized Ratio (INR) in whom the goal is a rapid reversal of INR to a safe range, whether in preparation for invasive procedure or in suprathreshold INR due to vitamin K antagonist (VKA) treatment.

Vitamin K promotes liver synthesis of clotting factors (II, VII, IX, X) by an unknown exact mechanism; nonetheless, it has been not clearly demonstrated that phytonadione lowers the risk of major haemorrhage despite the associated higher risk of bleeding.

Clinical practice guideline recommendations have evolved over time. Nevertheless there is still lack of compliance between published guidelines due to the limited data available.

Despite what might be think, intravenous phytonadione administration is not free of side effects like anaphylactoid reaction, overcorrection of INR and resistance to VKAs.

MATERIAL & METHODS

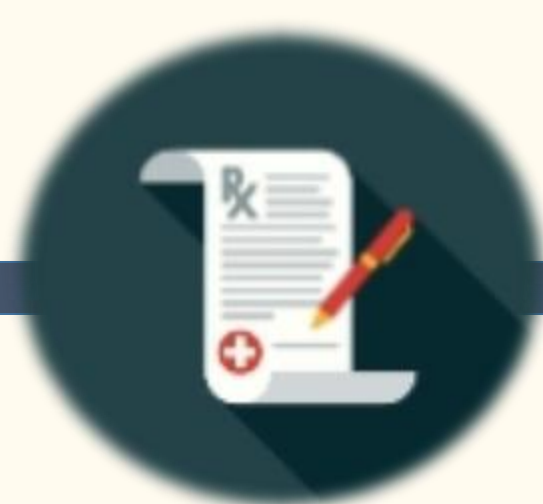
Retrospective observational study in a single hospital center which included 47 adults hospitalized adults who were on prescription of phytonadione 2mg intravenous



47 Adults hospitalized in HUA during 2019



Phytonadione 2mg iv



Date of birth sex, posology, nº doses adm, INRs, time of INRs analysis



Stata/IC® V.15
Cir means, cir ttest, twoway scatter

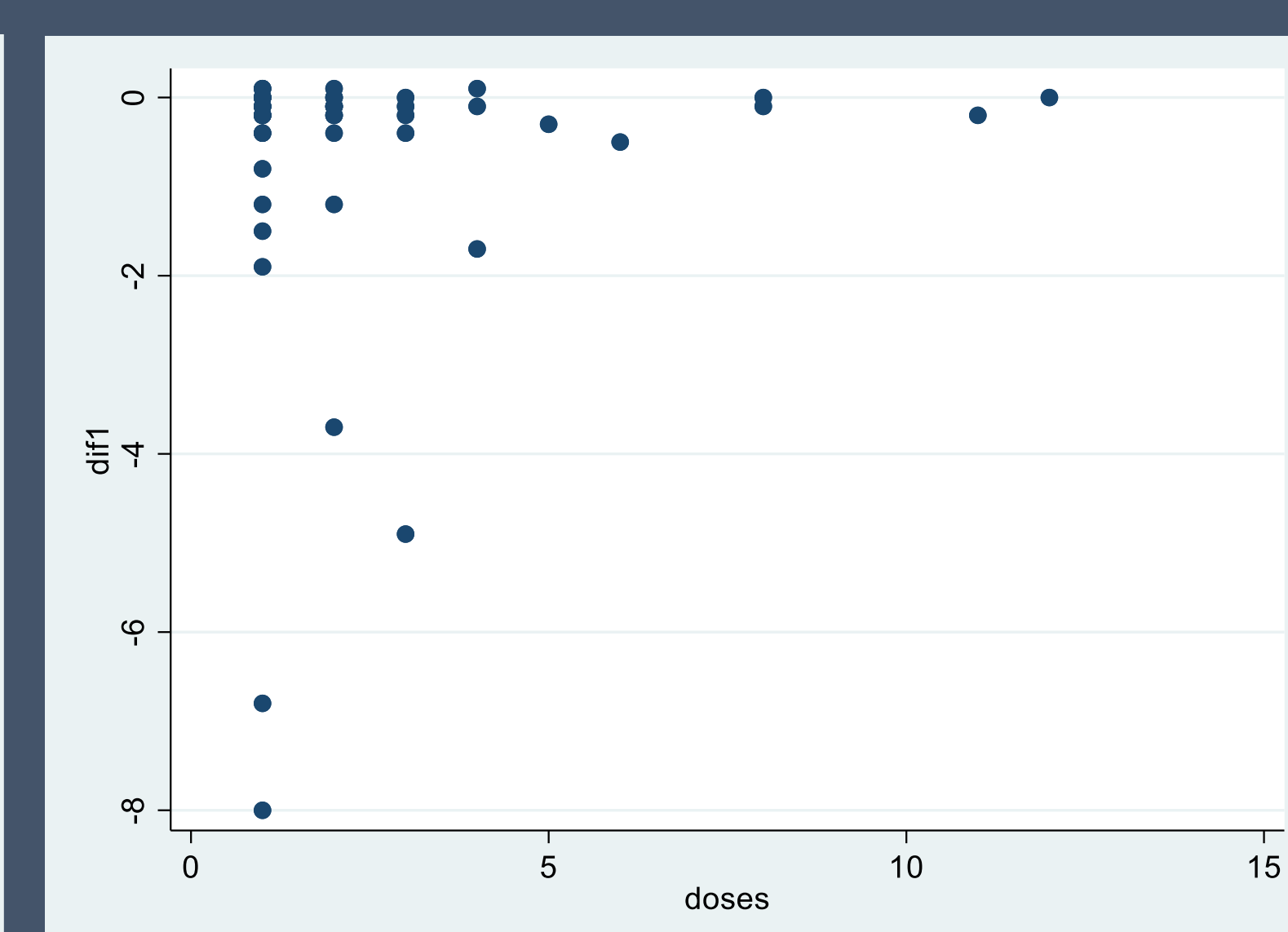
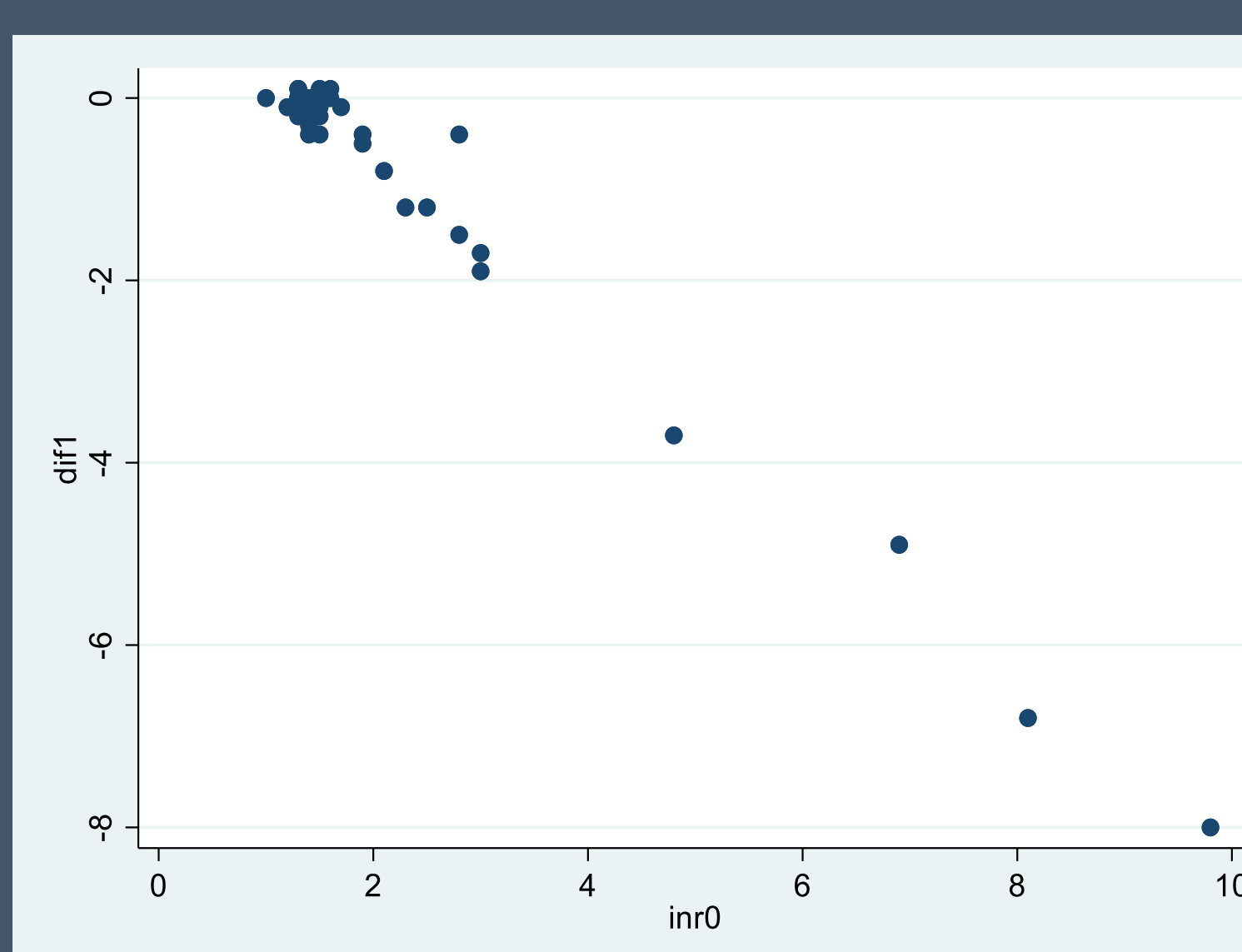
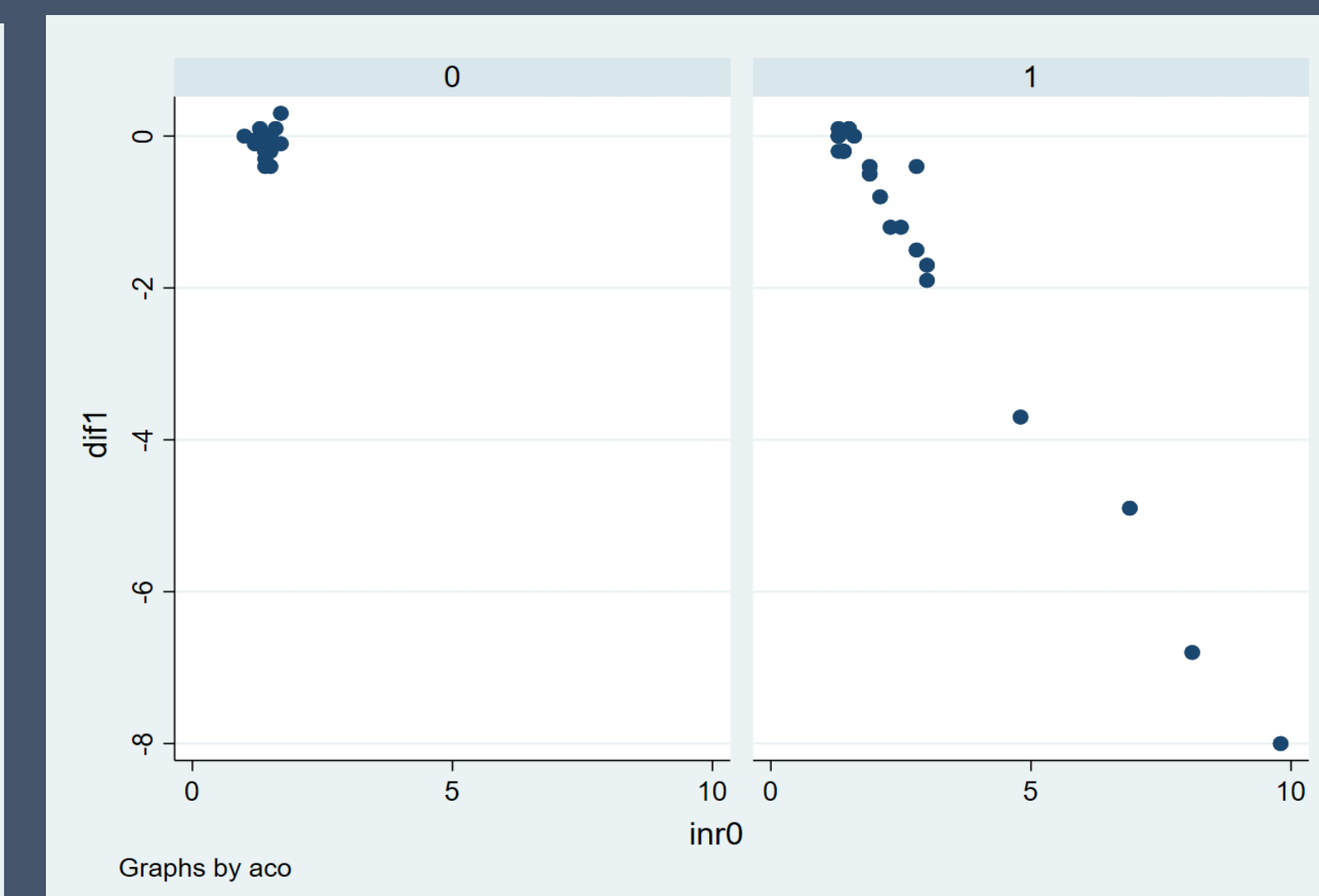
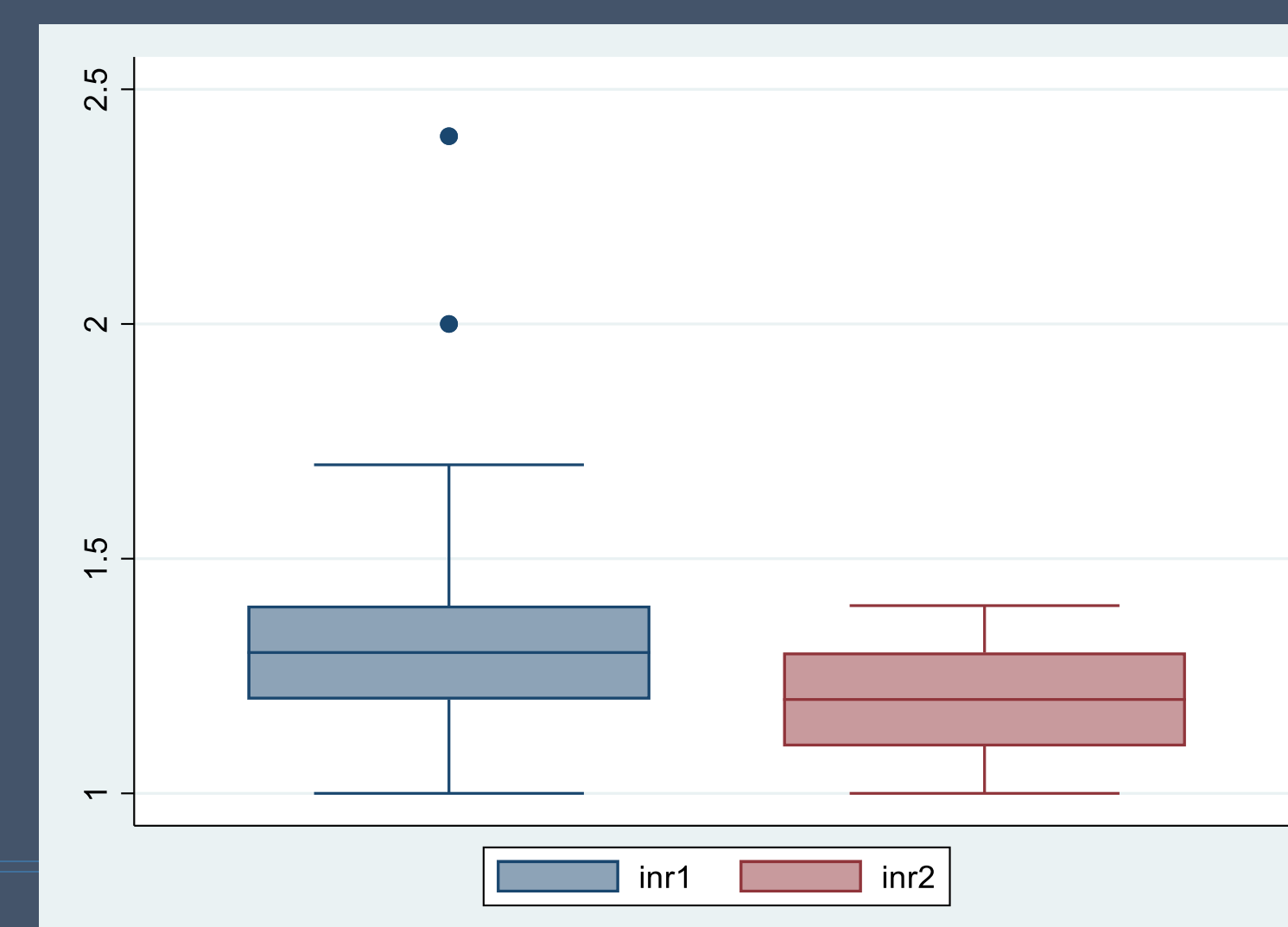
AIM & OBJECTIVES

- ✓ To analyse the reversal effect on INR due to 2mg intravenous phytonadione treatment depending on initial INR
- ✓ To evaluate the relation between the number of doses administered and the reduction on INR

RESULTS

The study included 47 adults; 24 (51.1%) men and 23 (48.9%) women; 4 frequencies were registered: unique dose (29.8%), every 24 hours (29.8%), every 12 hours (12.8%) and every 8 hours (27.7%); with average age of 74.3 years (CI95: 70.4-78.3).

No age mean difference was seen among sex (p 0.32) unlike between not and anticoagulated adults (p 0.001; 12.1; CI95 5.1-19.2) or between AVK treated and not treated patients (p 0.0001; 14.4; CI95: 7.4-21.4).



Pearson correlation of INR reversal resulted to be significant in function of original INR ($r -0.99$; CI95: -0.995 to -0.983 ; $p 0.000$) and AVKs/not AVKs ($r -0.52$; CI95: -0.70 to -0.27 ; $p 0.000$) while is not related to the number of doses administered (0.14 ; CI95: -0.18 to 0.42 ; $p 0.39$) neither age ($p -0.12$; CI95: -0.39 to 0.18 ; $p 0.44$).

CONCLUSIONS

Even though the INR is not a parameter of consensus to evaluate haemorrhage risk this study demonstrates:

- ✓ Phytonadione reversal effect on elevated INR depends on AVK treatment status patient and initial INR
- ✓ Phytonadione reversal effect on elevated INR DOES NOT depend on the number of doses administered or age

