

PHARMACIST'S ROLE IN CLINICAL PHARMACOKINETIC MONITORING OF DIGOXIN: MINIMISING TOXIC EFFECTS

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C01-CARDIAC THERAPY

Background

The digoxin range conventionally used (0.8 to 2.0 ng/mL) may be suitable for patients with atrial fibrillation (AF), although a lower range is preferable for patients with congestive heart failure (CHF) (0.5 to 1.0 ng/ml).

Purpose

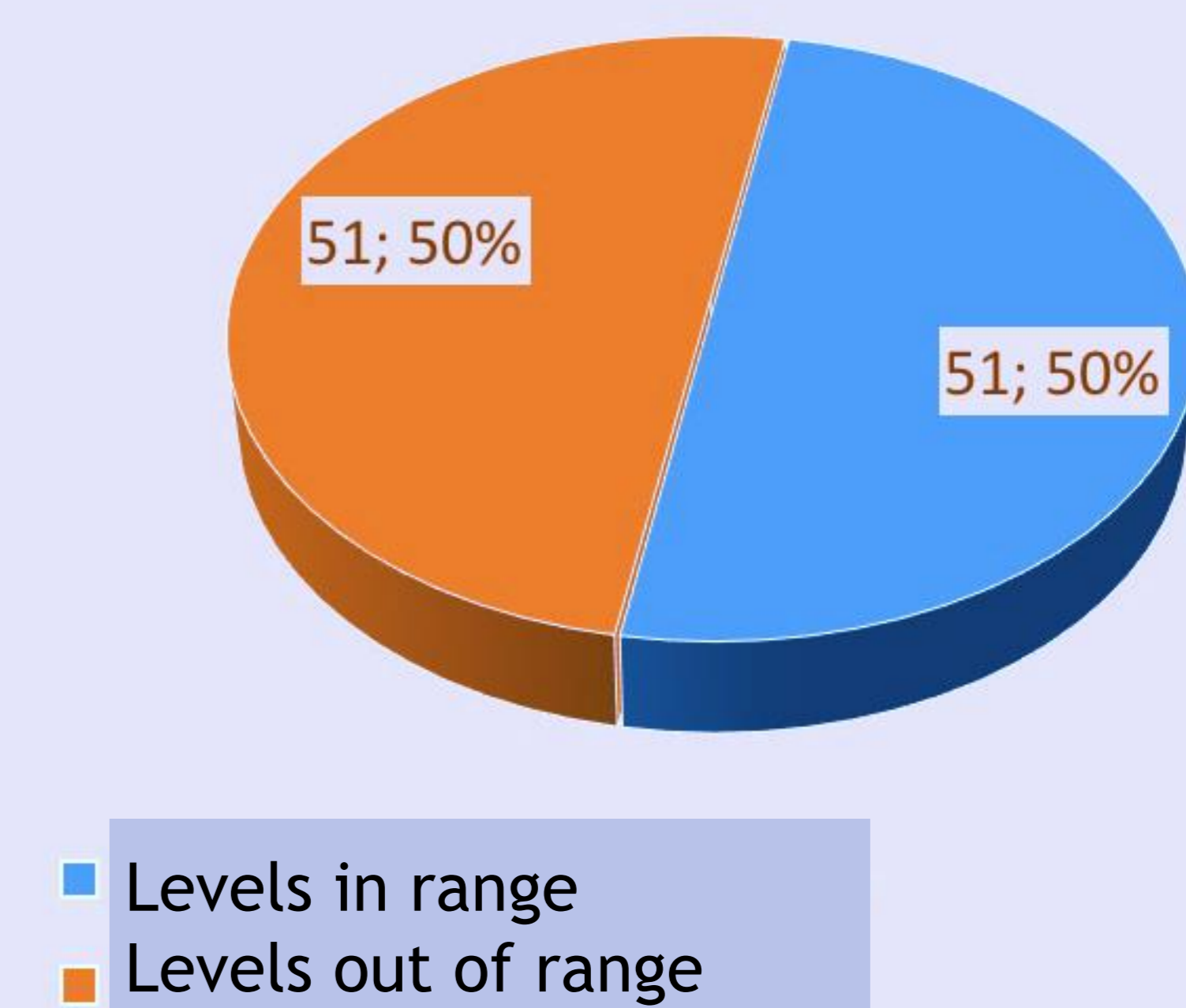
To study if digoxin is monitored correctly and according to recent evidence.

Material and methods

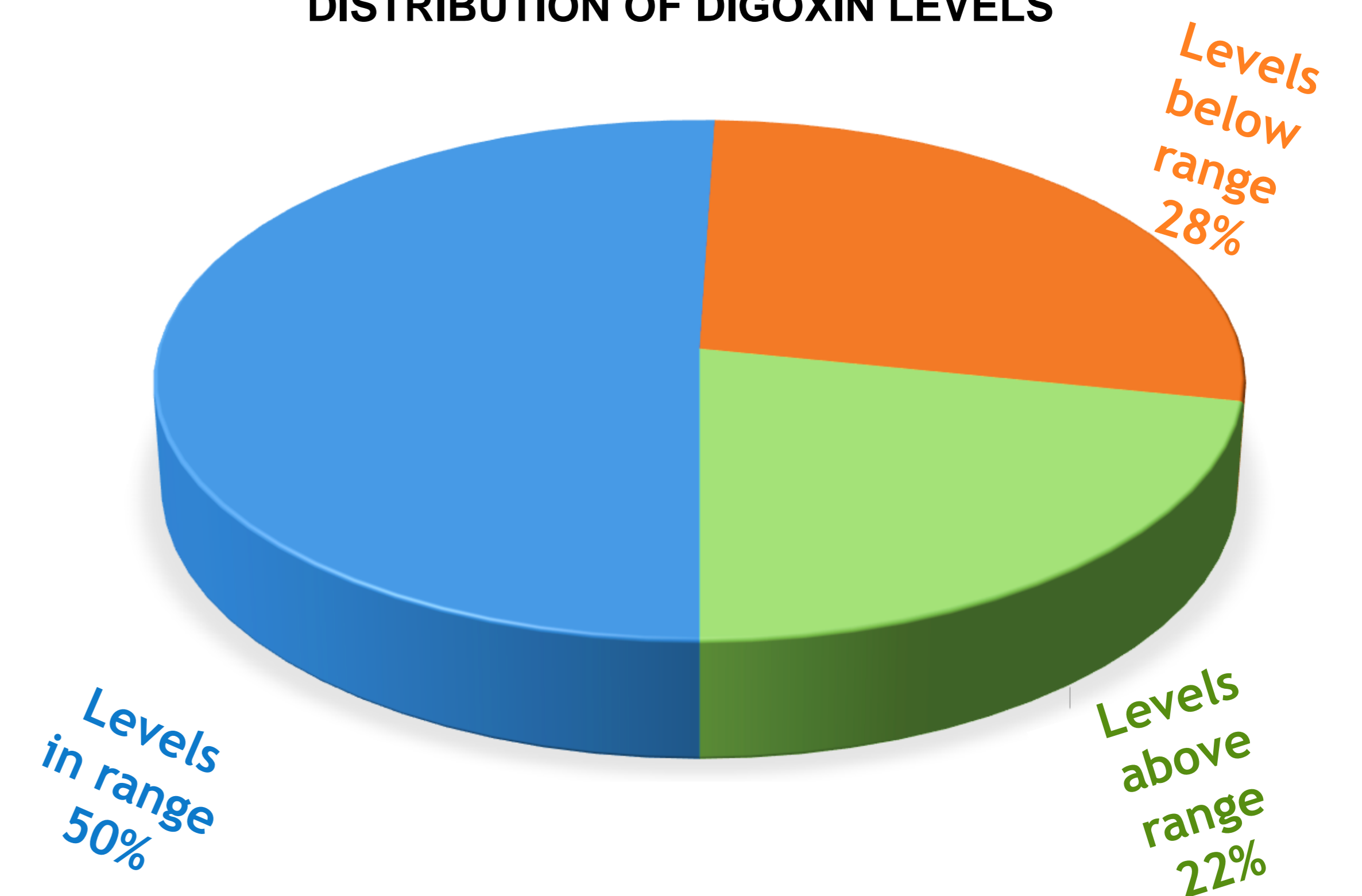
Retrospective study conducted between January and June 2016. Field of study: Two tertiary hospitals and their reference areas. The population consisted of 666,000 people. Adult patients with analytical determinations of digoxin during the study period were included. Digoxin concentrations were studied in blood samples of patients with CHF and/or AF. The percentage of patients with inappropriate levels of digoxin according to recent evidence were detected. Results were statistically interpreted. A descriptive analysis was conducted; followed by a chi-square test to calculate the differences between all variables. The possible influence of age (younger or older than 75 years) and sex were also analyzed.

Results

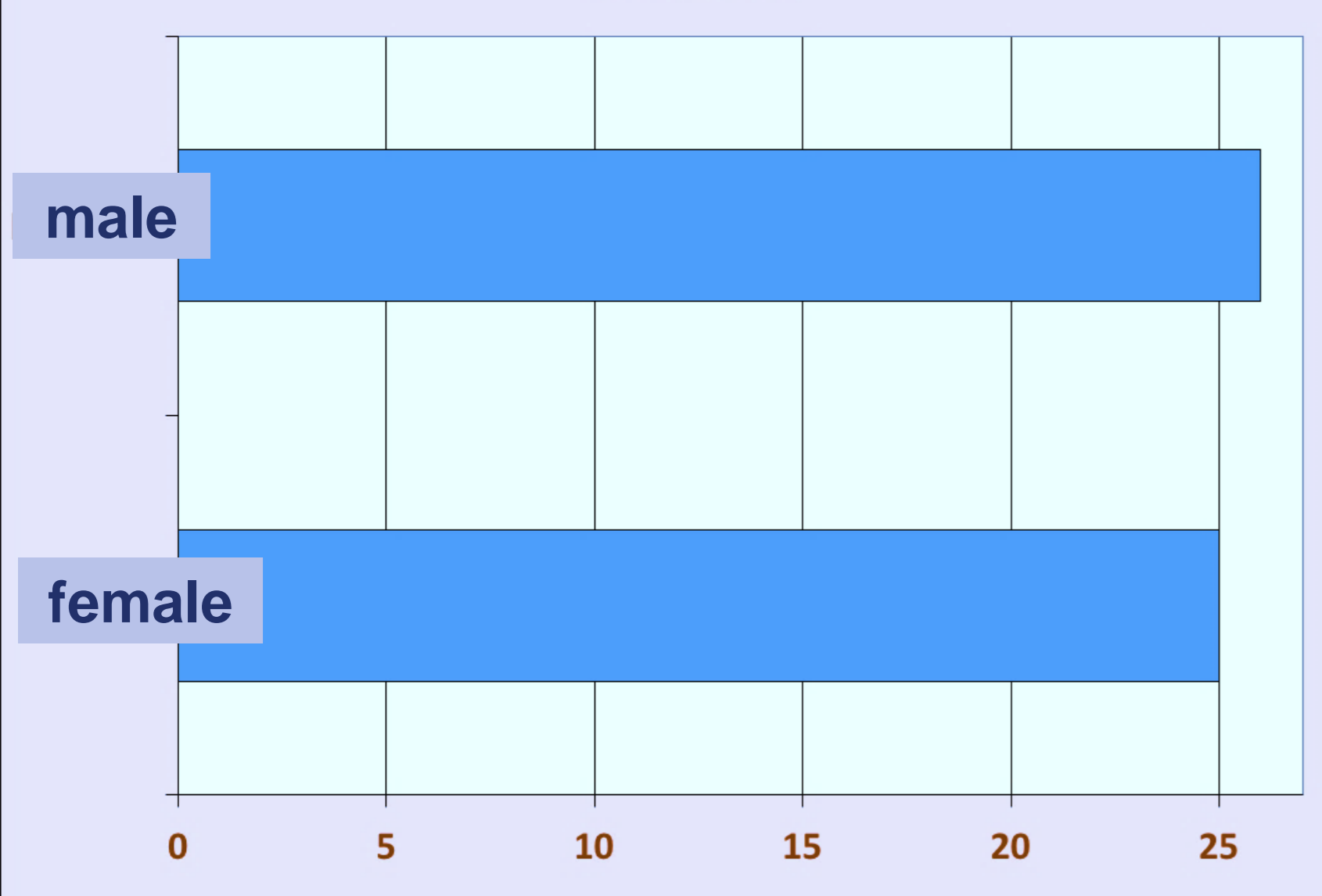
ANALYTICAL DETERMINATIONS



DISTRIBUTION OF DIGOXIN LEVELS

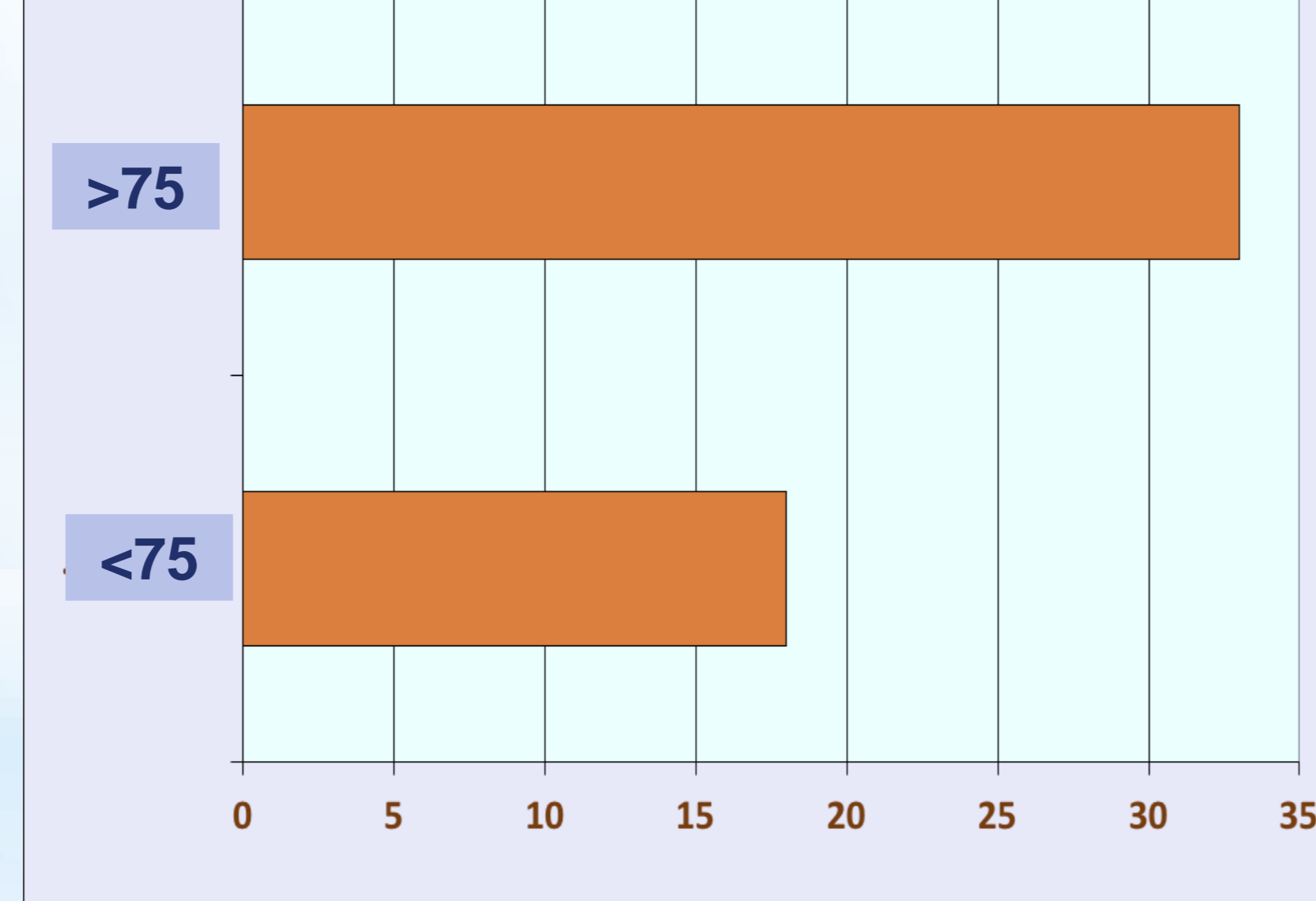


DISTRIBUTION OF DIGOXIN LEVELS ACCORDING TO SEX



P=0.903

DISTRIBUTION OF DIGOXIN LEVELS ACCORDING TO AGE



P=0.0481

Conclusions

The high number of determinations out of range may indicate that in many cases healthcare professionals are not aware of the appropriate ranges of digoxin for each pathology.

The elderly population had higher percentages of inappropriate blood digoxin concentrations, being more likely to have digoxin levels above range. Thus, therapeutic drug monitoring of digoxin in blood is not being use as often as it should, taking implicit poor control of patients treated with digoxin.