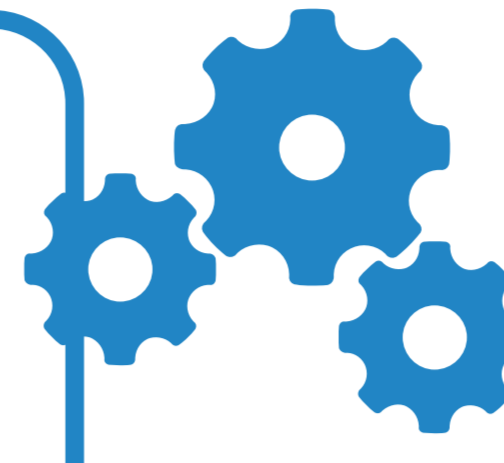


## Background and Objective

Oral anticoagulants (OA) are the most common drug class associated with preventable adverse drug events in hospitalized patients that require optimizing the pharmaceutical analysis (PA) process.



In this context, a regional audit was conducted on PA of prescriptions oral of OA.

The aim of this study is to provide an overview of the treatment by OA in the hospital by evaluating the consistency of the OA prescriptions compared with national and European guidelines and evaluate the pharmaceutical interventions.

## Design

This study is based on the collection of *PA data* (demographics, indication, posology, drug interactions, monitoring) as well as the collection of *pharmaceutical interventions* and discordance between *guidelines recommendations* and *clinical practice*.

The **inclusion criteria** were any patient treated with OA (vitamin K antagonists (VKA), non-vitamin K antagonist oral anticoagulants (NOACs)). Included patients were followed minimum 2 months.

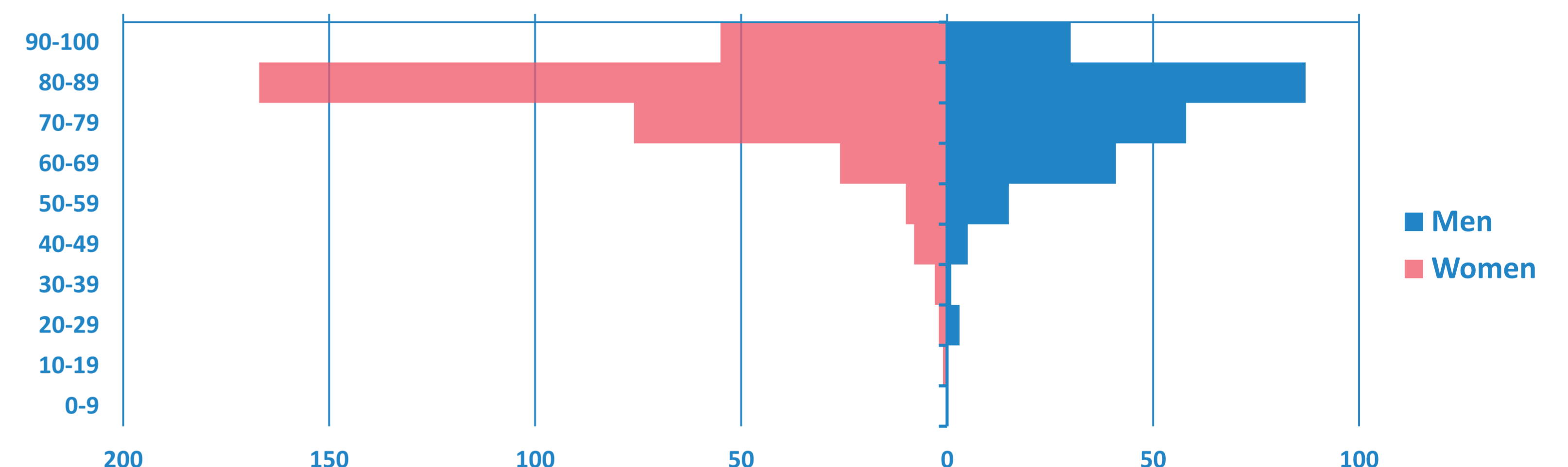
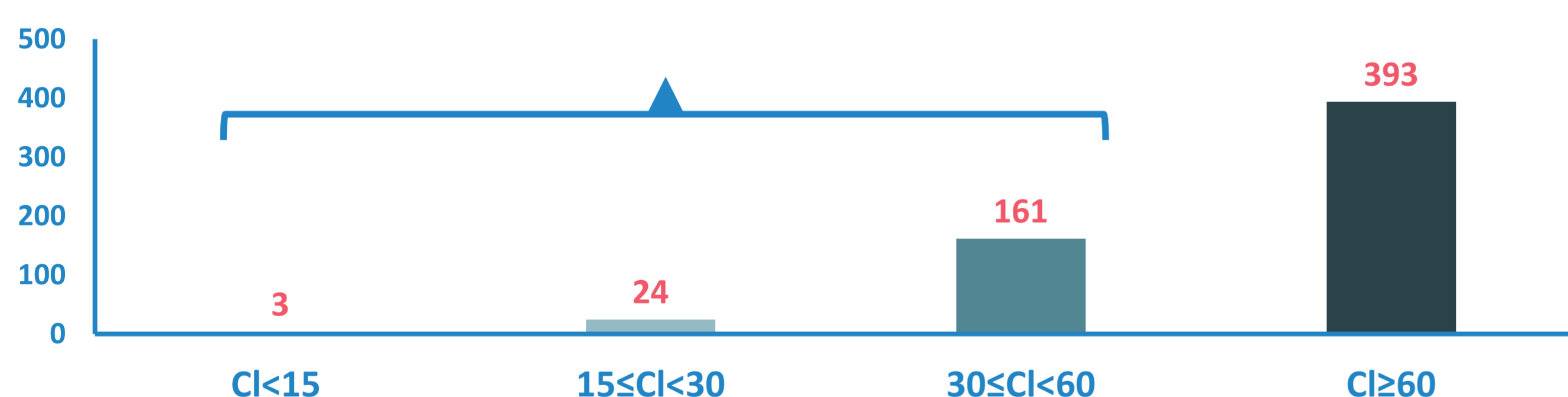
The **primary outcomes** include description of baseline *characteristics of patients*, the number of *inappropriate prescriptions* compared to the different clinical recommendations, the number of *pharmaceutical interventions*, the number of *adverse drug reactions* (ADRs) related to OA use and the assessment of *patient monitoring*.

## Results



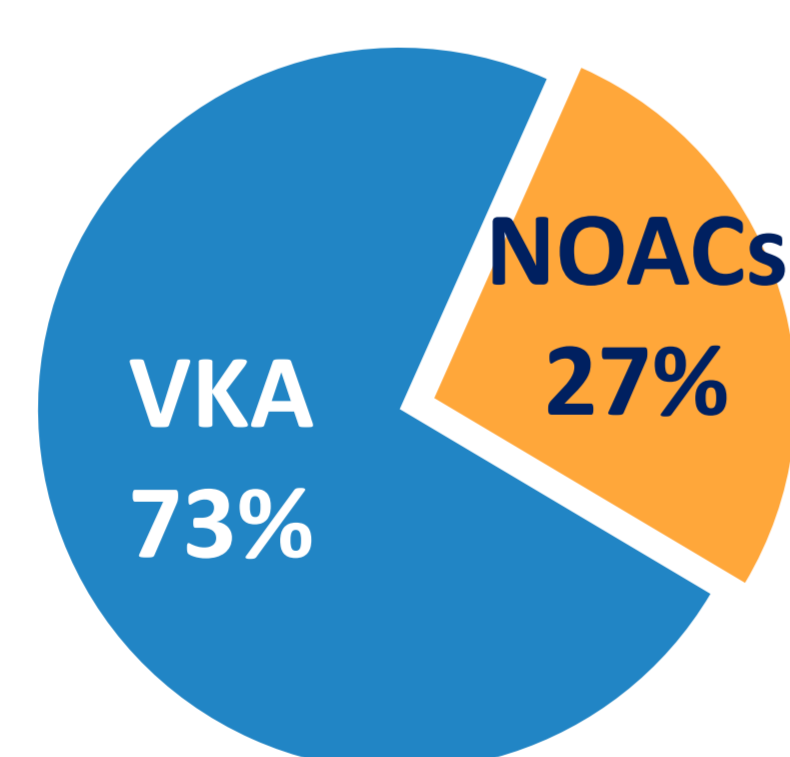
### Characteristics of patients :

- Average age : 78 years (70% of patients over 75 years old)
- Sex ratio : 0.68
- Renal function : 32% of patients had renal impairment



### OA Data :

> OA prescribed :

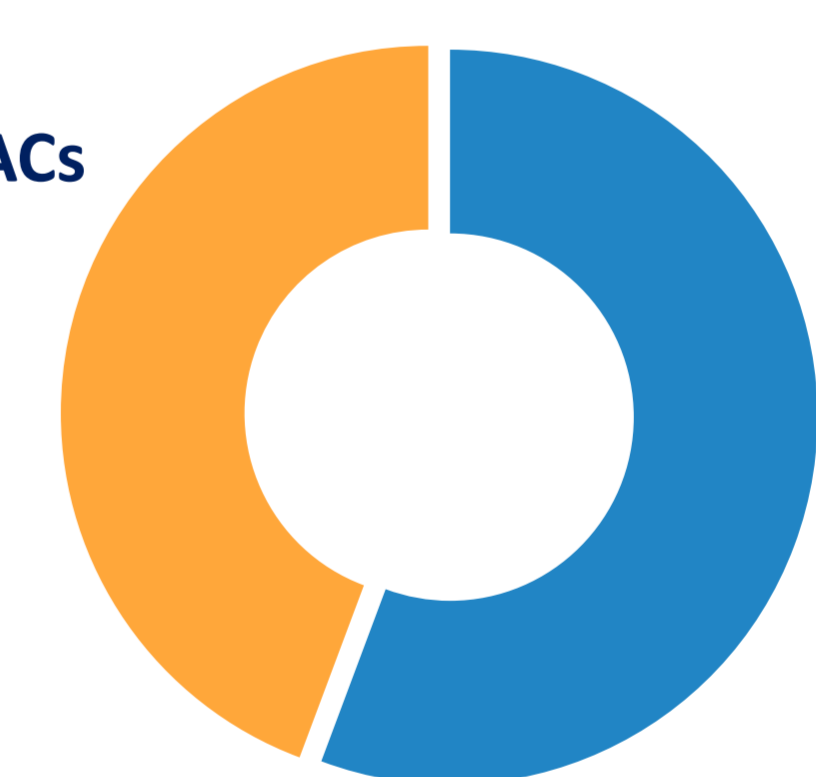


- It was the first prescription of OA for 27% of patients

- The most common indication was the non-valvular atrial fibrillation (60%)

→ In this indication, 99% of patients had CHA2DS2-VASc score ≥ 2 and nearly 30% had a high risk of bleeding (HAS-BLED score ≥ 3). OA are indicated

Initiation with NOACs  
44%



Initiation with VKA  
56%

### PA Data :

- 8 drug interactions were observed
- 35 ADRs occurred related to OA
- 42% of patients with an ADRs had a HAS-BLED score ≥ 3

12.5% of prescriptions were considered inappropriate

→ including 45% NOACs (no monitoring renal function in 13% of patients over 75 years initiating treatment, inappropriate posology in 14%, and 3% of contraindications)

- The rate of pharmaceutical interventions was 4%
- Nearly 60% of the prescriptions were already adapted when the pharmacist was starting analysis

## Conclusion

Prescribers are sensitized of the risks on the OA prescriptions, which explained the delay upon PA and low rate of pharmaceutical interventions. However, the high number of inappropriate prescriptions shows the necessity to improve the PA process on these drugs, particularly by actions on therapy initiation and patient monitoring, especially for NOACs. For this class, the impossibility of assess the level of anticoagulation by laboratory monitoring requires appropriate initiation and monitoring, especially an assessment of baseline renal function.