

SPONDYLOARTHROPATHY MANAGEMENT IN FRENCH PRIMARY CARE: ANKYLOSING SPONDYLITIS AND PSORIATIC ARTHRITIS

Authors: Marie Ducros, Jeanne Lacroix, Cheikh Tamberou, Nicolas Huiban

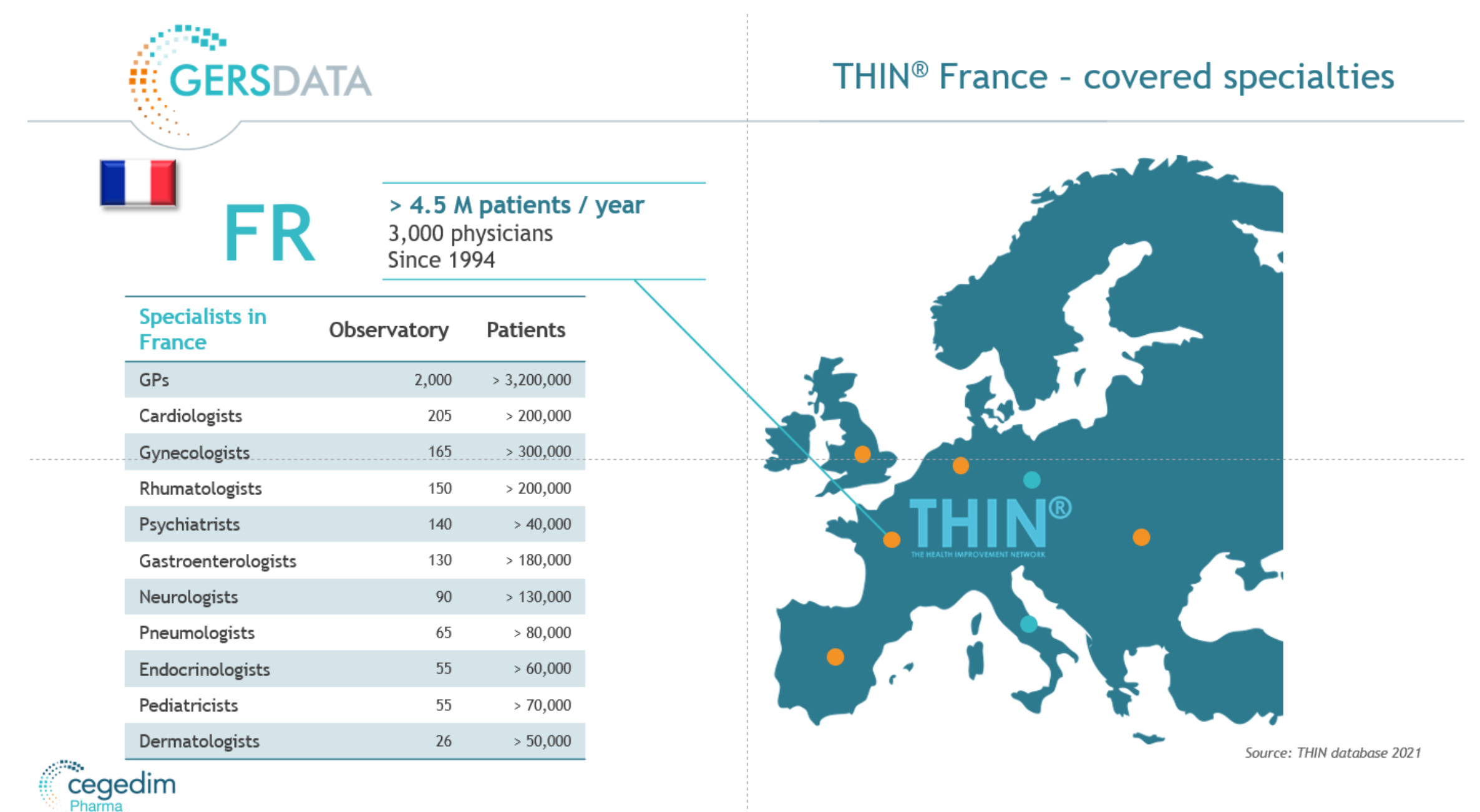
GER S SAS, Boulogne-Billancourt, France,
Corresponding author: cheikh.tamberou@gers-sas.fr

INTRODUCTION

Spondyloarthropathies include ankylosing spondylitis (AS) and psoriatic arthritis (PA), which affect approximately 0.3% and 0.19% of the French population, respectively. These conditions often involve delayed diagnoses and treatments, which can have significant consequences. This study aims to identify correlations between the disease management variables of general practitioners (GPs) and rheumatologists.

METHOD

- Data Sources:** THIN® France data (electronic health records) collected by GPs and rheumatologists, and institutional medical demographic data.
- Calculation of Delays:**
 - Diagnosis delay: time elapsed between the first recorded symptom and the first AS/PA diagnosis.
 - Treatment and biotherapy delay: time elapsed between the first AS/PA diagnosis and the first treatment/biotherapy prescription.
- Referral Rates:** Calculated based on consultations with rheumatologists recorded in the care reimbursement history.
- Principal Component Analysis (PCA):** Conducted using the FactoMineR package in R, with 21 quantitative variables for 12 regions. Correlations were explored using eigenvalues and PCA visualisation.



RESULTS

Ankylosing Spondylitis (AS):

- The first three axes of PCA explain 71.7% of the total inertia (Table 1)
- Higher referral rates are correlated with higher rates of diagnosis, treatment, and biotherapy initiation, primarily among rheumatologists (Fig.1)
- A higher number of patients is associated with longer delays in diagnosis and shorter delays in treatment and biotherapy initiation (Fig. 2)
- Medical demography does not show any significant correlation

Table 1: Eigenvalues for AS
the first three axes of the PCA account for 43.64%, 16.58% and 11.51% of inertia respectively (total=71.73%)

Axe	%	Cum. %
1	43.6	43.6
2	16.6	60.2
3	11.5	71.7
4	8.9	80.7
5	7.0	87.7
6	5.0	92.7
7	3.6	96.3
8	2.0	98.2
9	1.3	99.5
10	0.5	100.0

Figure 1: Correlation circle for AS

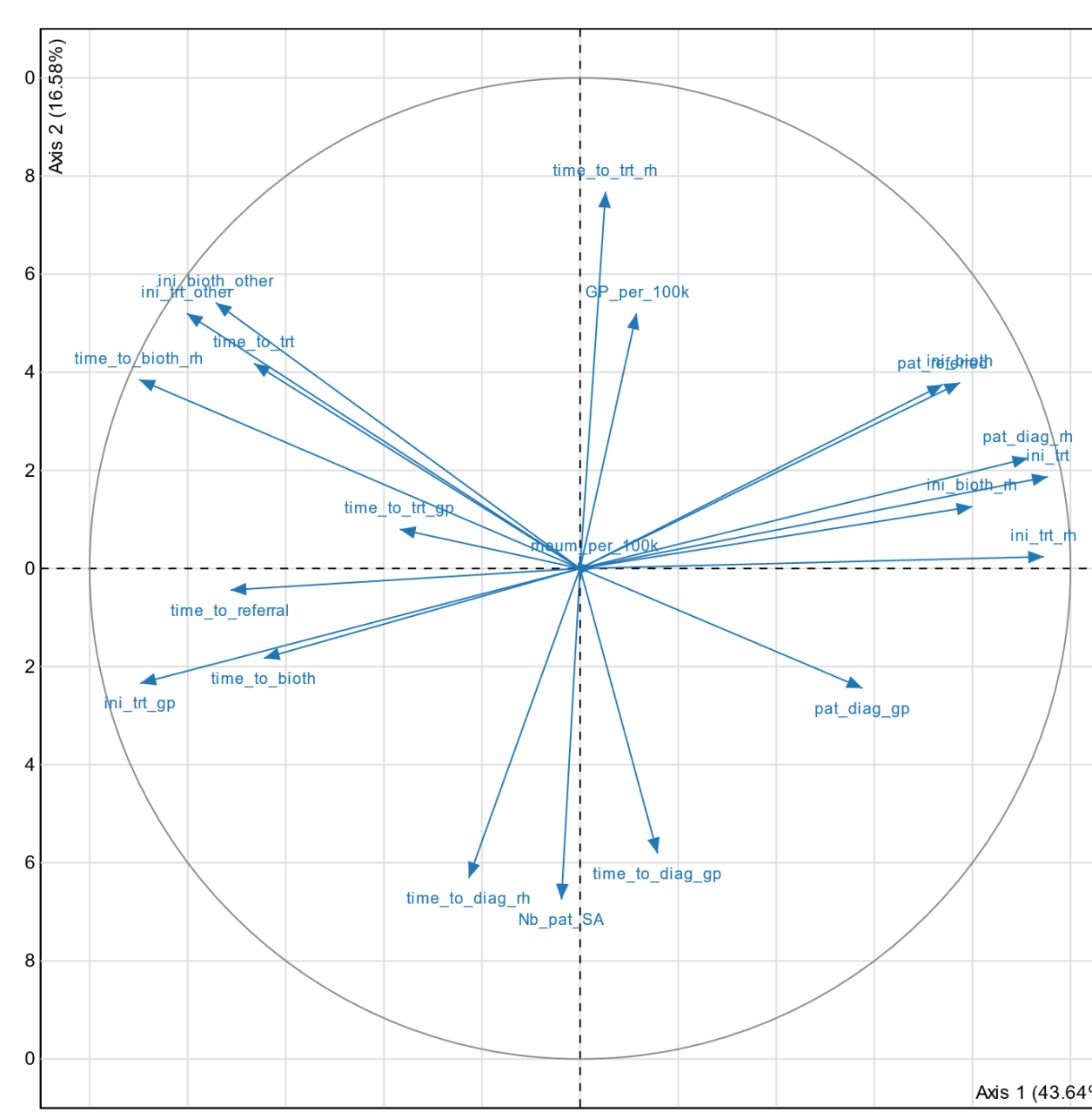
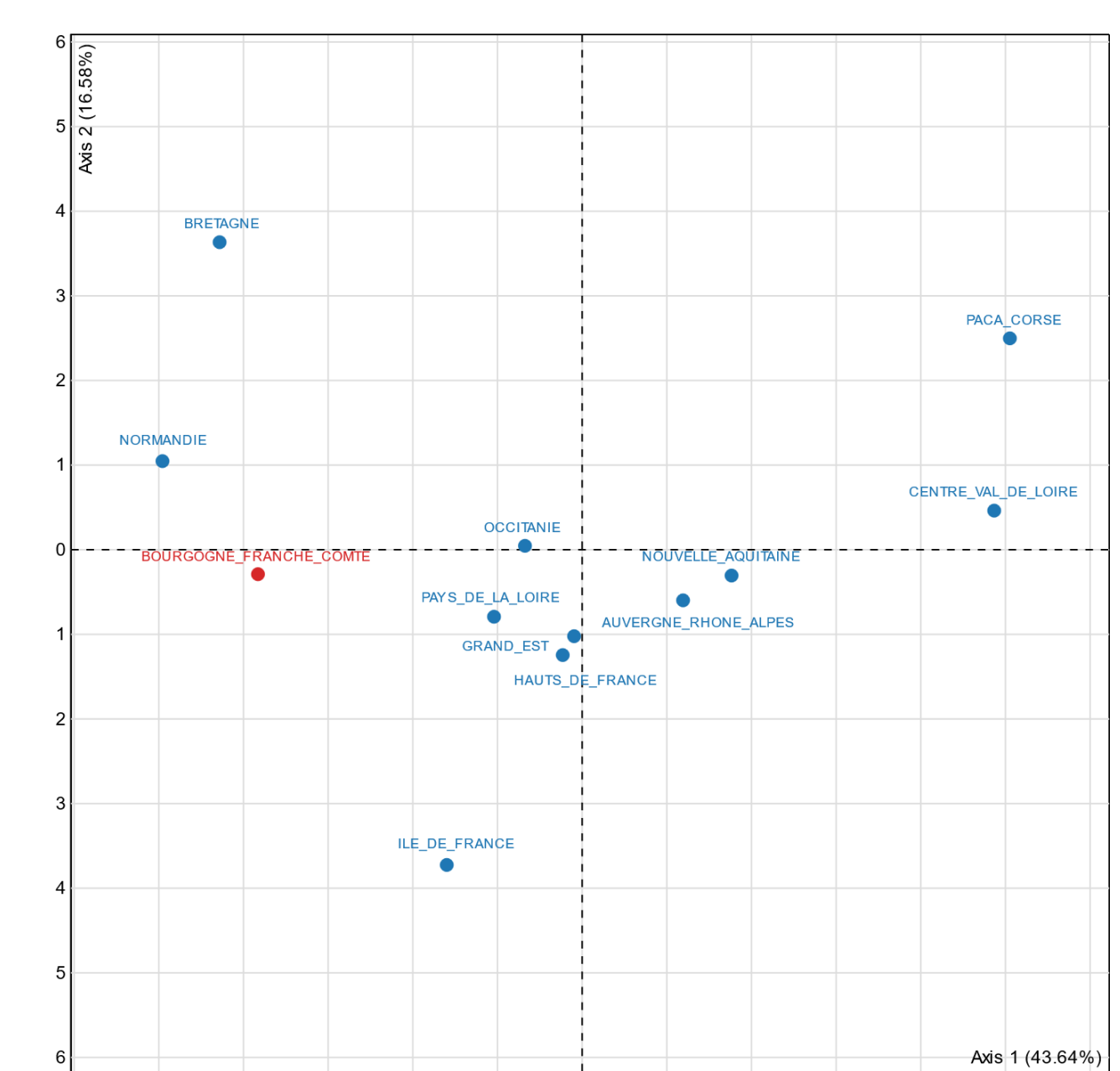


Figure 2: Graph of individuals for AS



Psoriatic Arthritis (PA):

- The first three axes of PCA explain 63.0% of the total inertia (Table 2)
- Higher rheumatologist densities are associated with shorter delays (Fig. 3)
- Some regions, notably Centre-Val-de-Loire and Provence-Alpes-Côte-d'Azur-Corse, exhibit high referral, diagnosis, treatment, and biotherapy initiation rates. In contrast, Bretagne and Normandie have lower rates and longer delays (Fig. 4)

Table 2: Eigenvalues for PA
The first three axes of the PCA account for 31.29%, 18.16% and 13.55% of inertia respectively (total=63.00%)

Axe	%	Cum. %
1	31.3	31.3
2	18.2	49.5
3	13.5	63.0
4	9.6	72.6
5	9.0	81.6
6	6.1	87.7
7	4.6	92.2
8	3.7	95.9
9	2.6	98.6
10	1.4	100.0

Figure 3: Correlation circle for PA

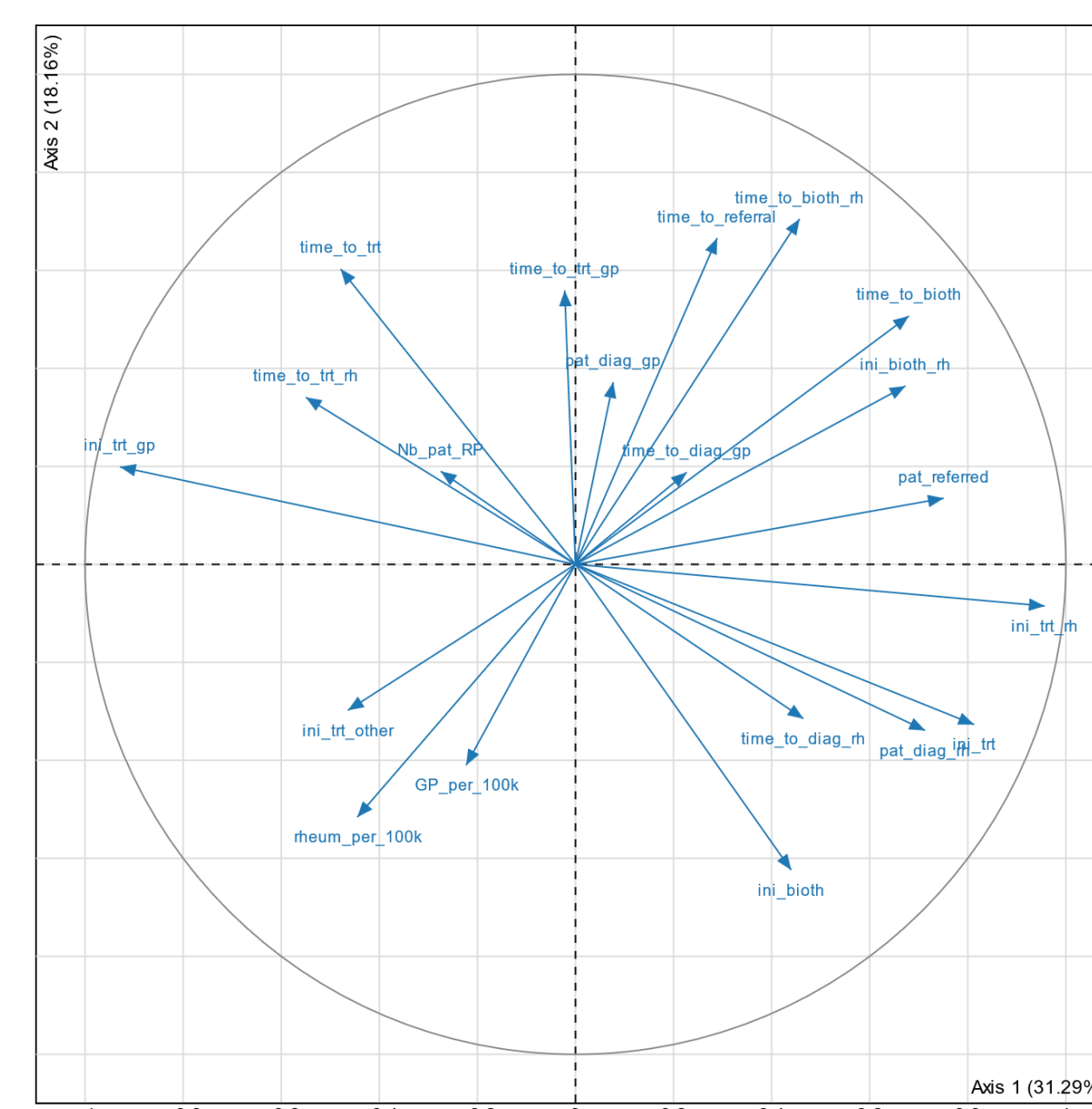
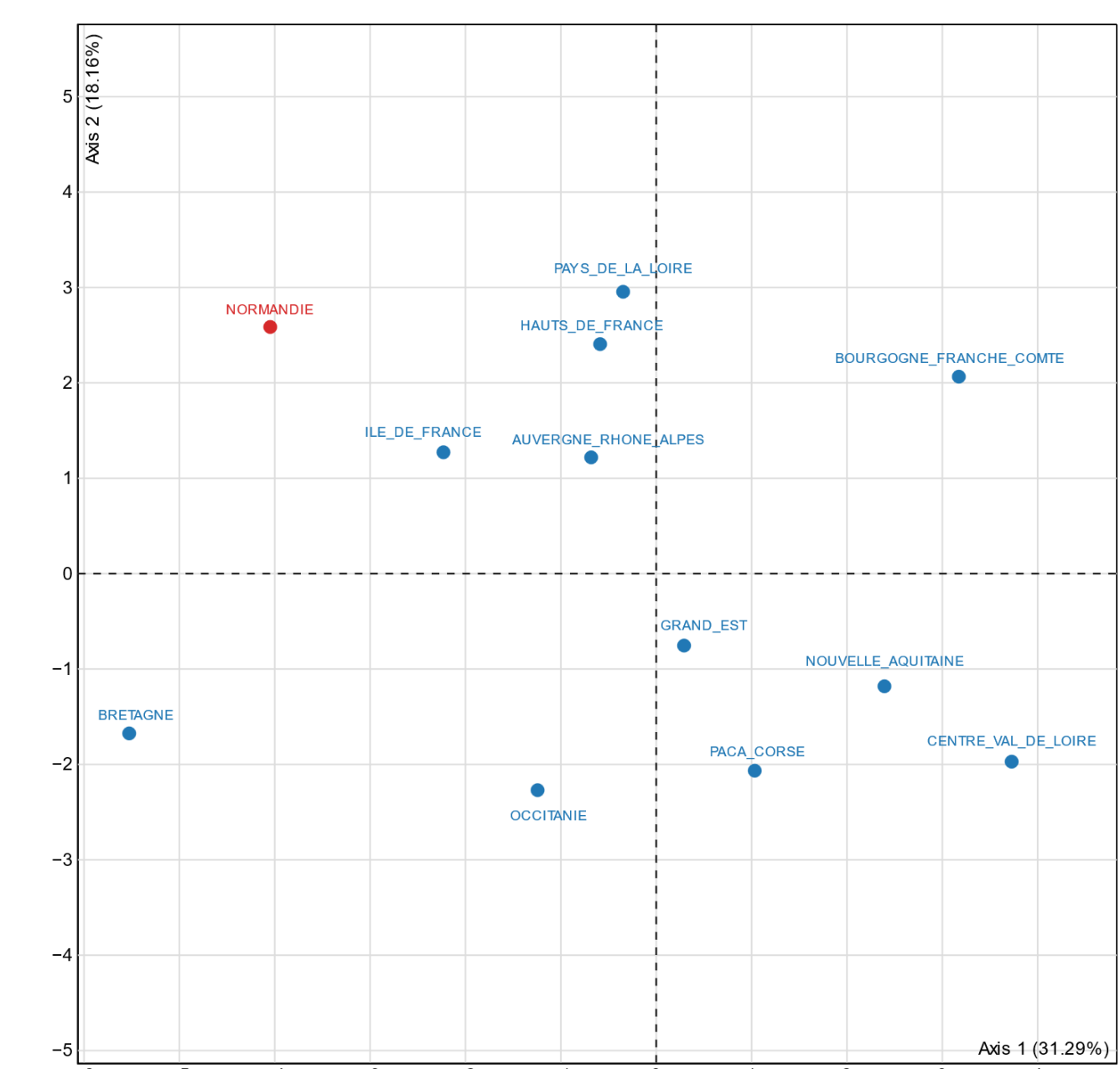


Figure 4: Graph of individuals for PA



CONCLUSION

Prolonged delays in diagnosing AS and PA can result in more severe cases by the time of definitive diagnosis. Therefore, prompt diagnoses and faster treatment or biotherapy initiation would improve outcomes. These findings highlight significant regional disparities in access to healthcare, which cannot be fully explained by medical demographics.

