

Introduction

Neovascular age-related macular degeneration (nAMD) is a chronic progressive neurodegenerative disease that can lead to severe irreversible vision loss.¹ Anti-vascular endothelial growth factor (anti-VEGF) agents have proven to be efficacious and safe treatment options for the management of patients with nAMD.² The three anti-VEGF agents available in Italy during the study period for clinical use include ranibizumab, aflibercept, and bevacizumab (off-label).

Objectives

This analysis was aimed at estimating resource utilization and associated direct costs in nAMD patients naïve to any anti-VEGF treatment in Italy.

Methods

This analysis was part of the broader RADIANCE study, a national multicentre retrospective observational investigation, which enrolled nAMD patients ≥50 years old, initiating anti-VEGF treatment between January 2017 and November 2018. To the best of our knowledge, in this first hybrid study on maculopathies in Italy, data collected from patients’ charts at 3 investigating centres were deterministically linked (through the fiscal code) at patient level with Claims databases from the associated Local Health Units. This innovative methodology, presented previously in more details,³ provided a comprehensive overview of the patient’s journey including the cost associated with the management of nAMD patients treated with the standard of care.

Results

Patients (N=87) were observed for a mean (SD) of 35.5 months (17.8): bevacizumab, ranibizumab and aflibercept were administered to 44.8%, 39.1% and 16.1% of patients, respectively. Mean (SD) number of anti-VEGF injections in the first year was 5.0 (1.7) and 2.3 (2.6) in the second year (*Figure 1*). Similarly, ophthalmologist visits decreased by 50% between the first and second year (from 12.5 to 6.9, *Figure 1*). This was mostly due to patients lost to follow-up (49.4%) or deceased (22.9%) during the observation period (*Figure 2*): overall, 92.0% of patients completed the first year, while 63.2% and 48.3% of patients were still in the study in the second and third year, respectively. Focusing on untraceable patients, the majority of patients were lost to follow-up during the second year of treatment (*Figure 3*). Overall, mean (SD) cost per patient over the initial 52-week follow-up period was 3,648€ (2,249€). Anti-VEGF treatments (30.4%) and ophthalmologist specialist visits (68.5%) were the most relevant cost items (*Figure 4*), with a mean (SD) cost per patient of 1,833€ (1,782€) and 1,617€ (779€), respectively (*Table 1*).

Conclusions

These results showed that after the first year of treatment, the disease management was rarely maintained thus potentially impacting the initial investment of healthcare resources. As suboptimal treatments could be associated to worse outcomes, therapies allowing a prolonged treatment interval while maintaining efficacy may be key to optimize the management of nAMD by lowering the burden for patients and caregivers.

REFERENCES

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- AFFILIATIONS
1. Department of Biomedical Sciences, Humanitas University, Milano, Italy; Eye Center, Humanitas Gavazzeni-Castelli, Bergamo, Italy
2. Department of Medicine - Ophthalmology, University of Udine, Udine, Italy
3. University Eye Clinic, Ospedale Policlinico San Martino IRCCS, Genoa, Italy
4. SC Servizio Epidemiologia Aziendale, ATS Bergamo, Bergamo, Italy
5. Institute of Hygiene and Evaluative Epidemiology, Friuli Centrale University Health Authority, Udine, Italy
6. A.Li.Sa., Genoa, Italy; Department of Health Sciences, University of Genoa, Italy
7. IQVIA, Milan, Italy
8. Roche S.p.A., Monza, Italy

Figure 1. Mean number of ophthalmologist visits and anti-VEGF injections per patient during the 1st, 2nd, and 3rd year of follow-up

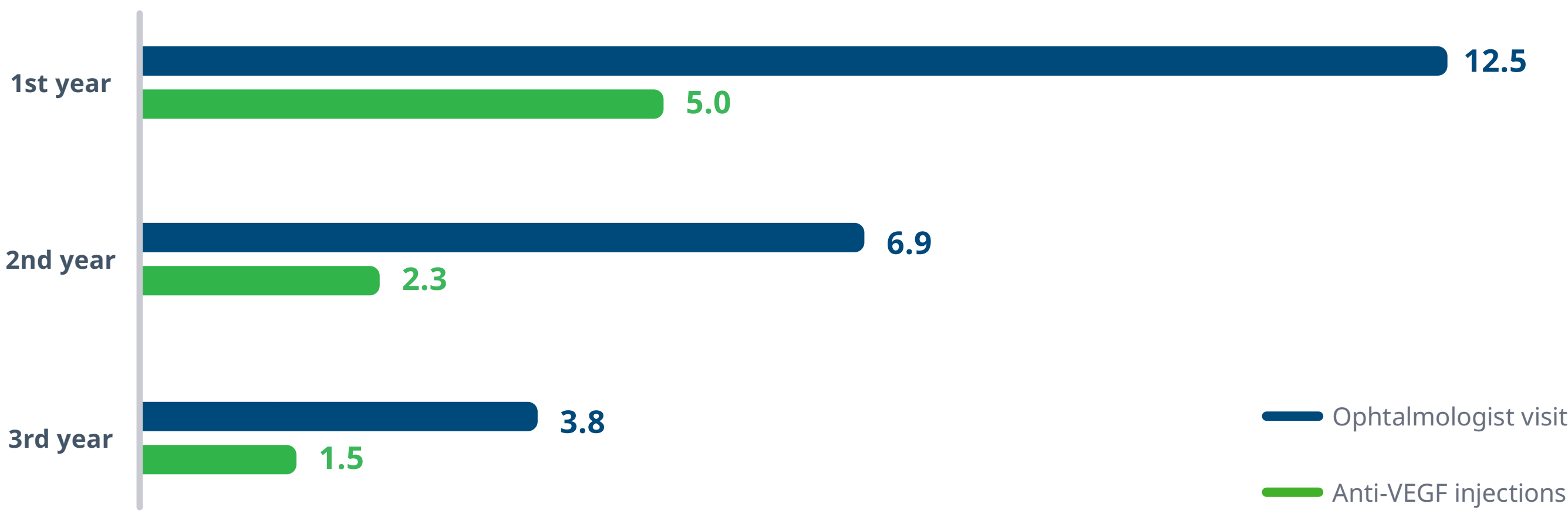


Figure 2. Patient classification at enrollment

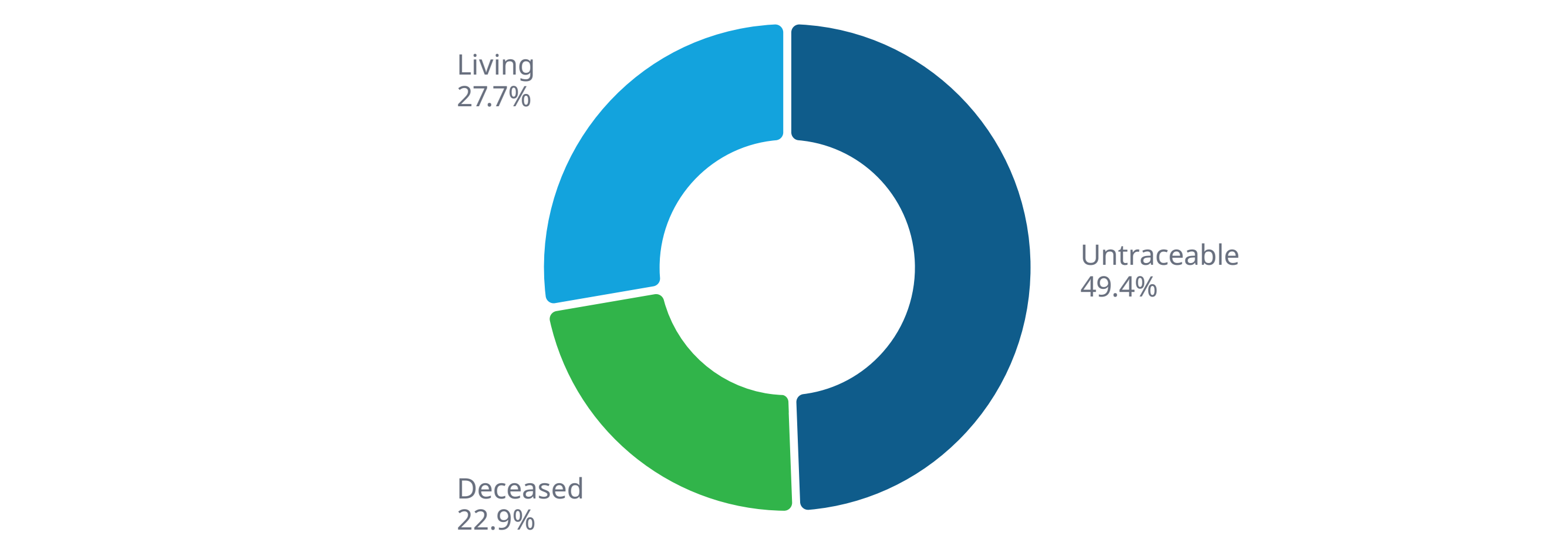


Figure 3. Number of patients who completed the 1st, 2nd and 3rd year of follow-up

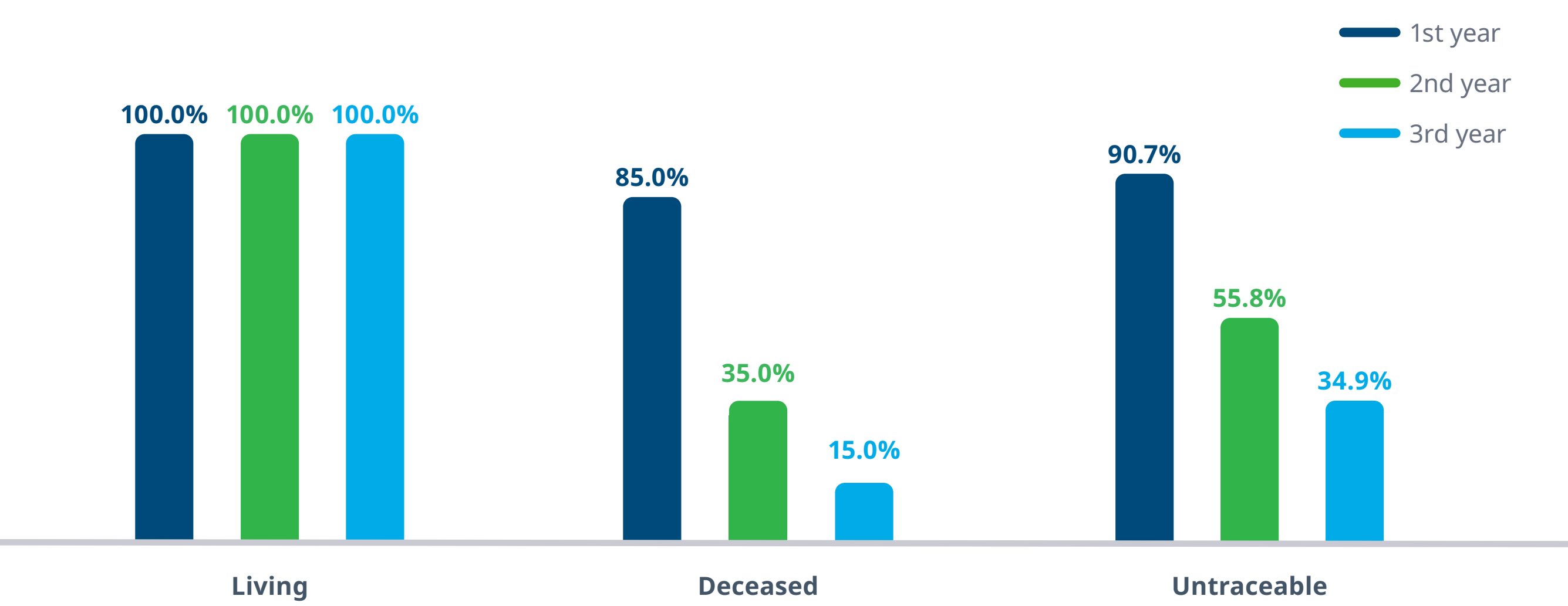
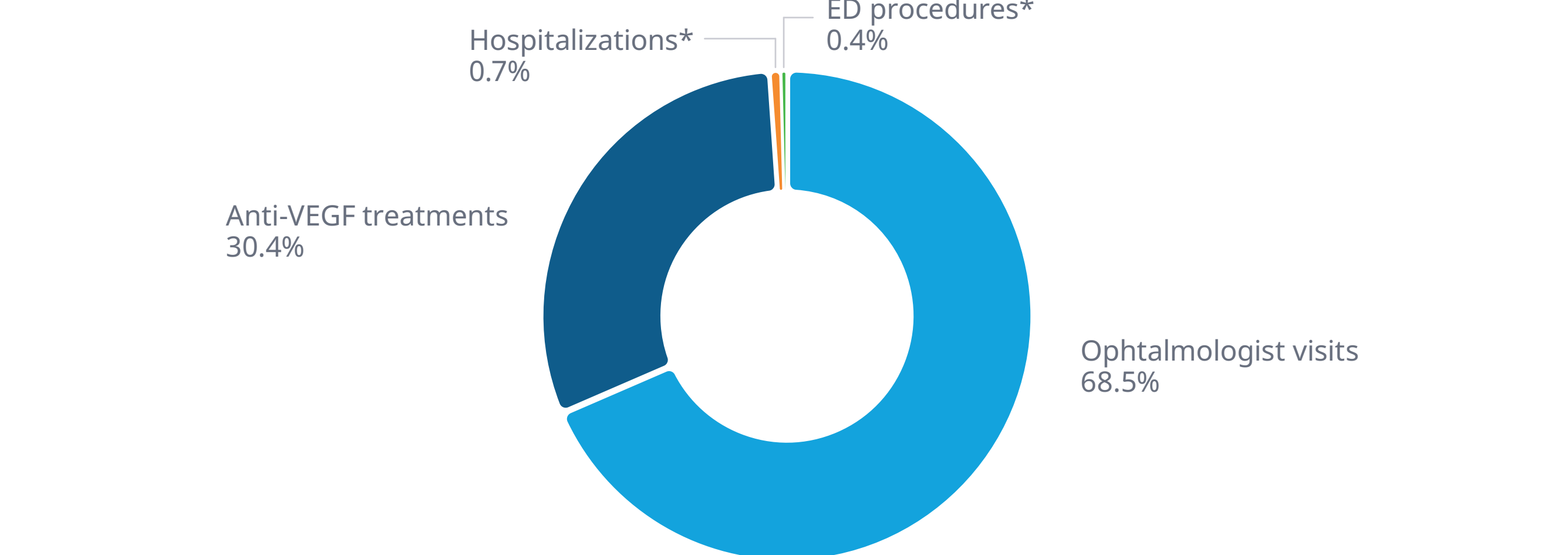


Figure 4. Number of anti-VEGF treatments, ophthalmologist visits, hospitalizations, and ED procedures registered during follow-up period



* related to Disorders of the Eye (ICD-9-CM 360-379)

Table 1. Costs per patient associated with Resource Utilization related to nAMD occurred in the 52-week follow-up period

	Mean (SD)	Median	25 th - 75 th Percentile	Min - Max
HOSPITALIZATIONS*	196 € (1,216 €)	0 €	0 € - 0 €	0 € - 9,132 €
ANTI-VEGF TREATMENTS	1,833 € (1,782 €)	1,850 €	51 € - 3,648 €	16 € - 4,900 €
OPHTHALMOLOGIST VISITS AND DIAGNOSTIC TESTS	1,617 € (779 €)	1,493 €	1,072 € - 1,847 €	132 € - 4,571 €
ED PROCEDURES*	1 € (6 €)	0 €	0 € - 0 €	0 € - 36 €
OVERALL COSTS	3,648 € (2,249 €)	3,093 €	1,603 € - 5,474 €	863 € - 10,067 €

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