

BACKGROUND

- Rituximab is a chimeric, anti-CD20 monoclonal antibody. In addition to its approved indications, its off-label use has increased in the management of a variety of Neurologic diseases.
- Purpose: To describe rituximab prescriptions in Neurology department, and evaluate the scientific evidence in off-label indications in order to rationalize its use.

MATERIAL AND METHODS

- Retrospective observational study including all Neurology patients under rituximab treatment from January 2012 to January 2020.
- Following data were collected: demographic (sex and age), clinical (indication), therapy related (dose, posology, previous treatments and adverse events) and economical (annual cost). 'The Oxford 2011 Levels of Evidence (LE)' was used to categorize evidence.

RESULTS

66 patients
(63% women, average age $45,6 \pm 12,2$ years)

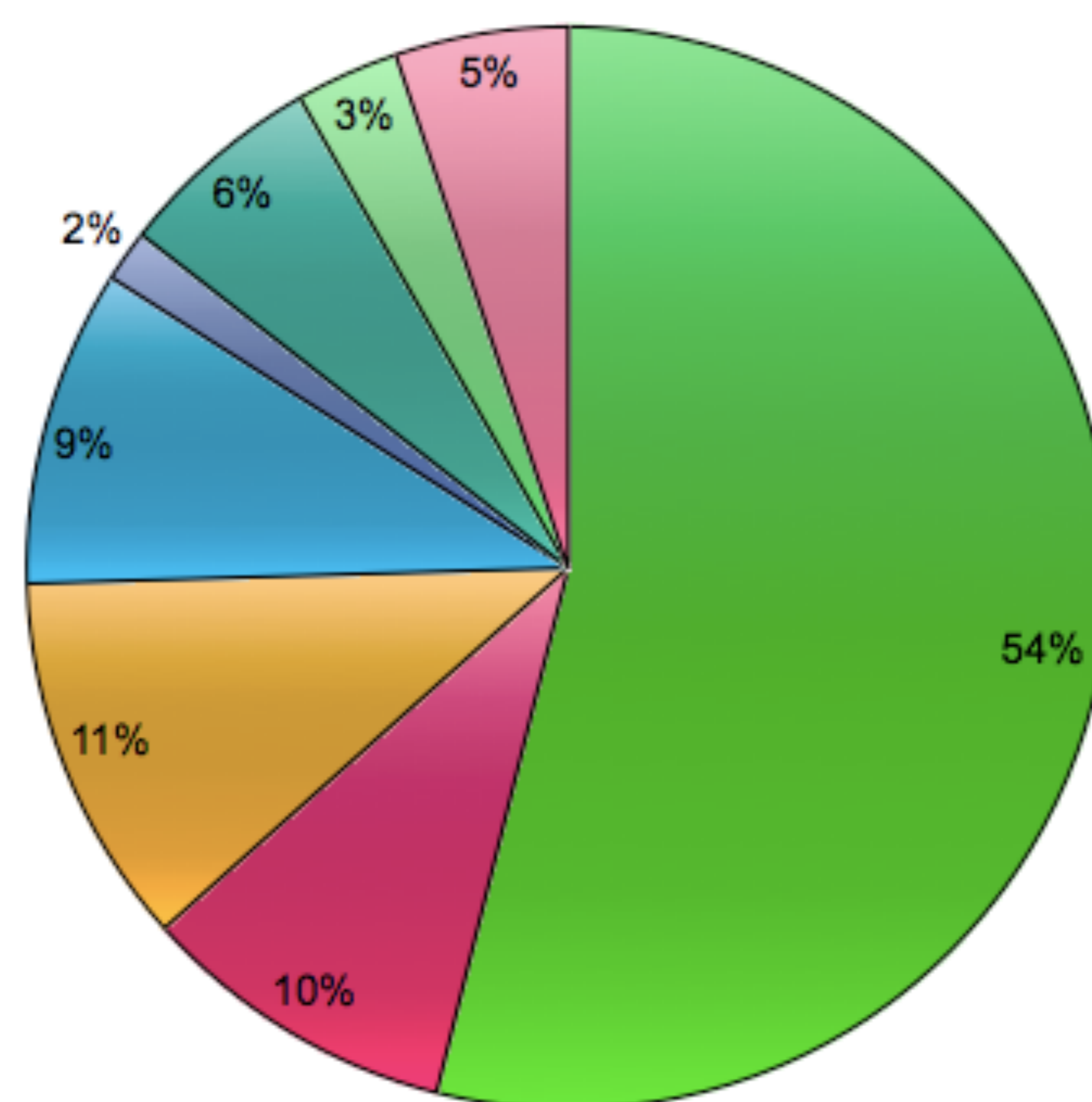


100% off label use

Indication and LE, describing benefit/no benefit/harm

Most habitual dosage regimen was: 500-1000mg on first month (days 1 and 15, repeated six months later) and a maintaining dose of 500-1000mg each 6-12 months.

Adverse events:
infusion-related reactions (n=4)
infections (n=12):
- respiratory (n=6)
- urinary (n=5)
- dermic (n=1)



- Relapsing-Remitting Multiple Sclerosis (RRMS) LE:2, no benefit
- Primary/Secondary Progressive Multiple Sclerosis (PMS), LE:2, no benefit
- Optic Neuromyelitis (ONM), LE:4, benefit
- Myasthenia Gravis (MG), LE:4, benefit
- Demyelinating inflammatory chronic polyradiculoneuropathy (DICP), LE:4, benefit
- Optic Neuritis, no good quality evidence
- Isolated Central Nervous System Vasculitis, no good quality evidence
- Other Neurologic Disorders or Syndroms

Average cost per patient is 6.366€ during first year, and 2.546€ each following year. 78% of this cost was spent in treating pathologies in which rituximab has shown poor evidence.

CONCLUSIONS

Off-label rituximab is extensively used in neurological pathologies with no strong evidence. As many adverse events have been observed, close monitoring of patients is suggested. The high economic impact makes necessary to rationalize rituximab prescription and optimise efficiency of sanitary resources.