

The Oxford CNS Antibody MDT: A Joint Neurology and Psychiatry Forum

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INTRODUCTION

- Antibody-mediated conditions in psychiatry are poorly understood.
- Encompasses conditions where auto-antibodies bind to neuronal membrane antigens -> Classically, these cause acute encephalitis with red flag symptoms requiring urgent neurological treatment.
- Sometimes, patients sit on the **borderline between specialties, presenting instead with primarily psychiatric symptoms** (among others).
- May make management decisions more difficult for clinicians.

REFERRAL AND SERVICE ANALYSIS

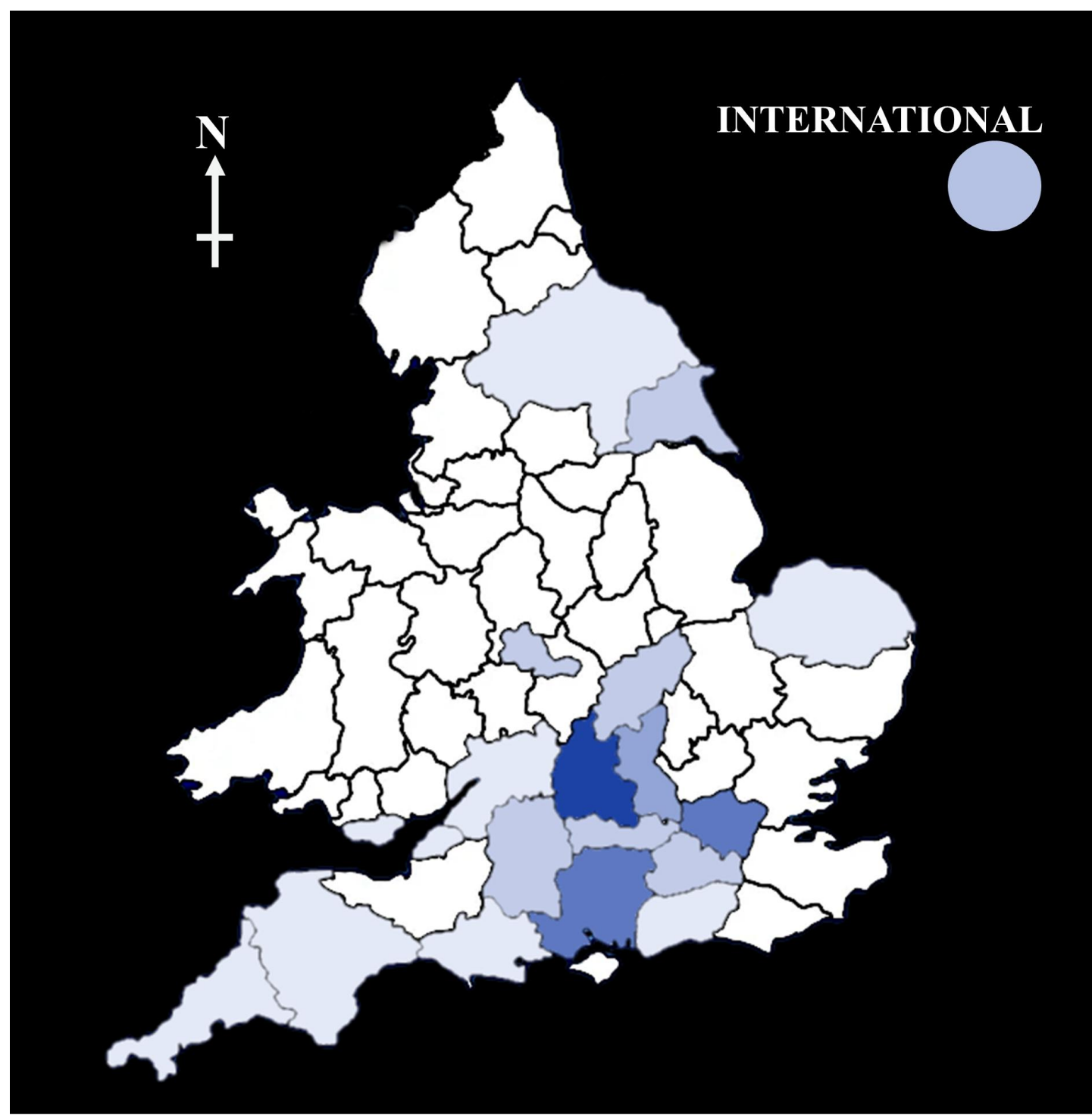


Fig. 1: Heat map illustrating the numbers of patients referred to the MDT per county of England and Wales. Colour saturation is correlated to number of referred patients. Eight patients' referral location was not known. Two cases were International from the Republic of Ireland and United States of America.

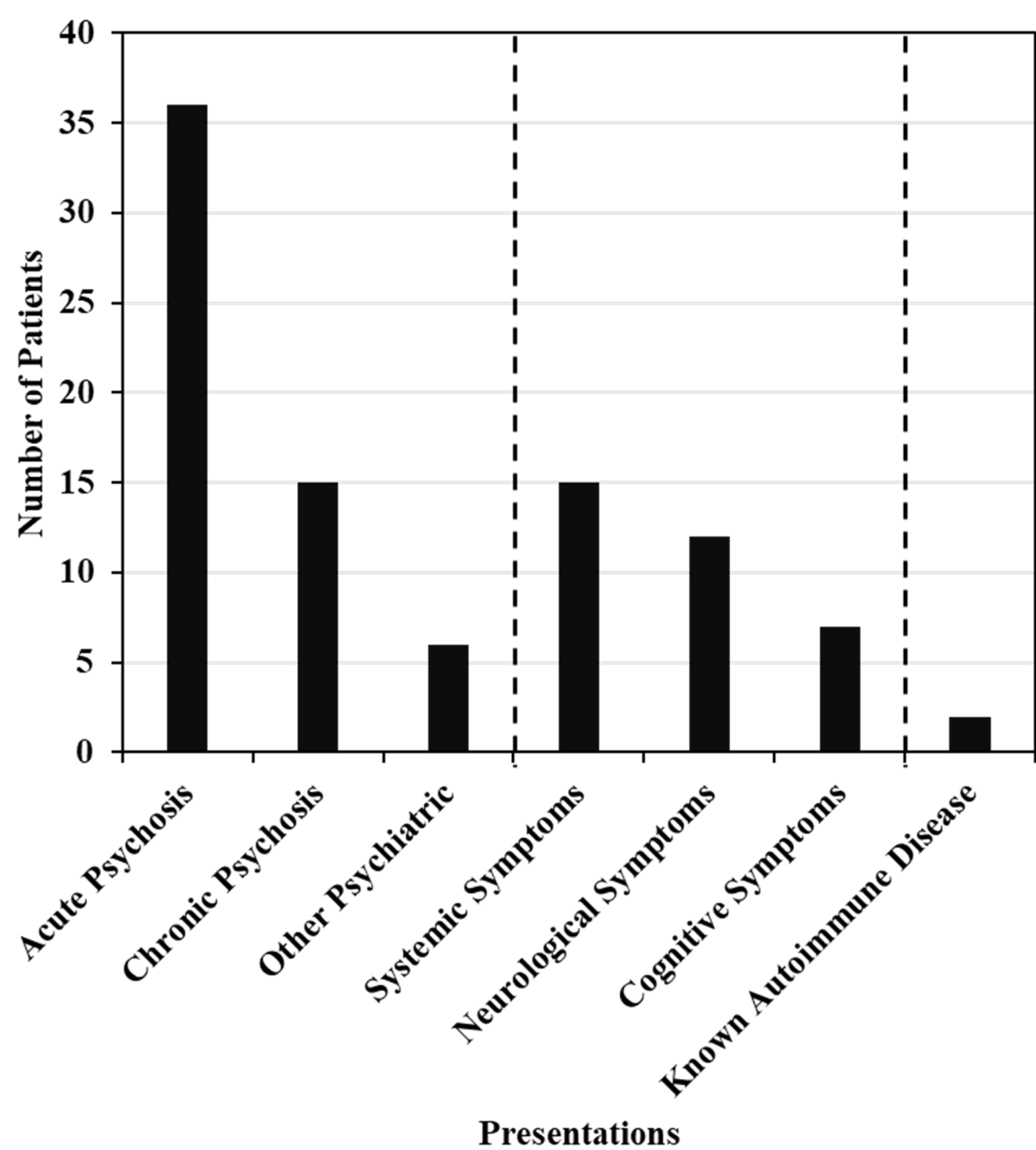


Fig. 2: Bar chart illustrating number of referred patients presenting to the MDT with coded presentations at initial referral. Cases can be coded in multiple categories. Acute psychosis is defined as symptoms lasting between 2 weeks and 2 years; with chronic psychosis being for >2 years.

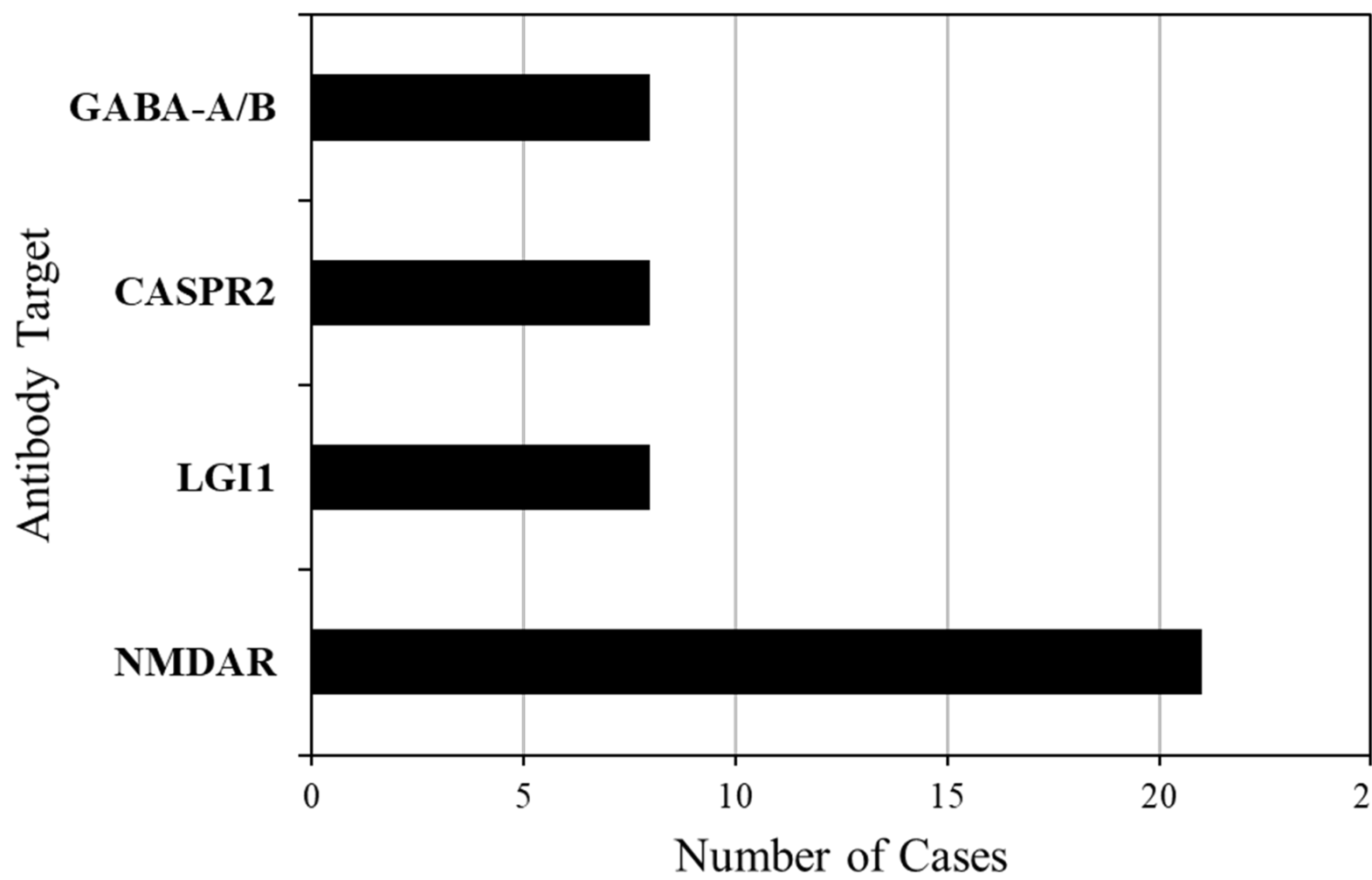
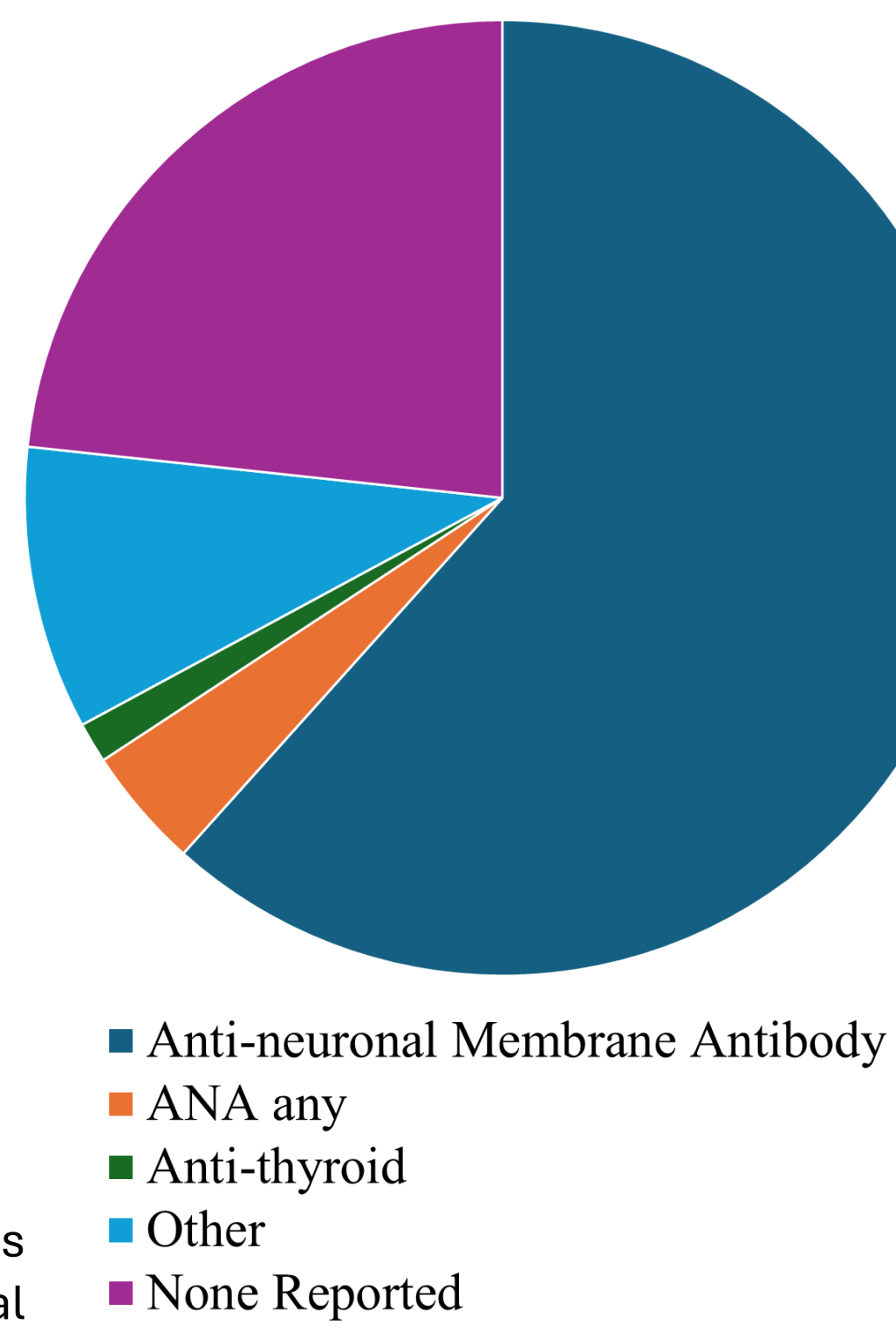


Fig. 3: Pie chart showing proportions of antibody targets present at initial referral. Bar-in-pie shows proportions of anti-neuronal membrane antibody targets.

MDT STRUCTURE

- The Oxford CNS Antibody MDT brings together joint expertise to suggest management in these cases.
- Composed of:
 - **two neurologists,**
 - **two psychiatrists,**
 - **a laboratory biochemist**
 - **clinical research fellow.**
- Monthly meetings invite referring teams to discuss patients where antibody-mediated disease is suspected.
- Strong academic and research links within its members.

Case Cluster	Psychosis Chronicity	Serum Anti-Neuronal Antibodies Detected	Atypical Features*	Neurological/Systemic Features	Concurrent Other Autoimmune Disease
1	Acute	+	+/-	-	-
2	Any	+/-	+	+/-	-
3	Chronic	-	+	-	-
4	Any	+/-	+/-	+/-	+

Table 1: Table illustrating Case Clusters from initial referrals' shared and differing features seen in the Oxford CNS Antibody MDT. '+' = feature present, '+/-' = feature either present or absent, '-' = feature absent. * atypical features includes: treatment-resistance, refractory cases, fluctuant symptoms, episodic or recurrent psychiatric symptoms. Acute psychosis is defined as symptoms lasting between 2 weeks and 2 years; with chronic psychosis being for >2 years.

- Case Cluster 1:** Acute psychosis where local clinicians have tested for anti-neuronal antibodies, but significance is unclear. No neurological/systemic features
- Case Cluster 2:** Psychosis of any chronicity, where referral is primarily due to atypical psychiatric, systemic, or neurological symptoms which could indicate antibody-mediated conditions.
- Case Cluster 3:** (Closely related to Case cluster 2) anti-neuronal antibody negative cases with chronic psychiatric symptoms with atypical features, where clinicians consider wider differential to include anti-body mediated conditions.
- Case Cluster 4:** Other systemic disorders that present with psychiatric or neurological symptoms that warrant further discussion and investigation.

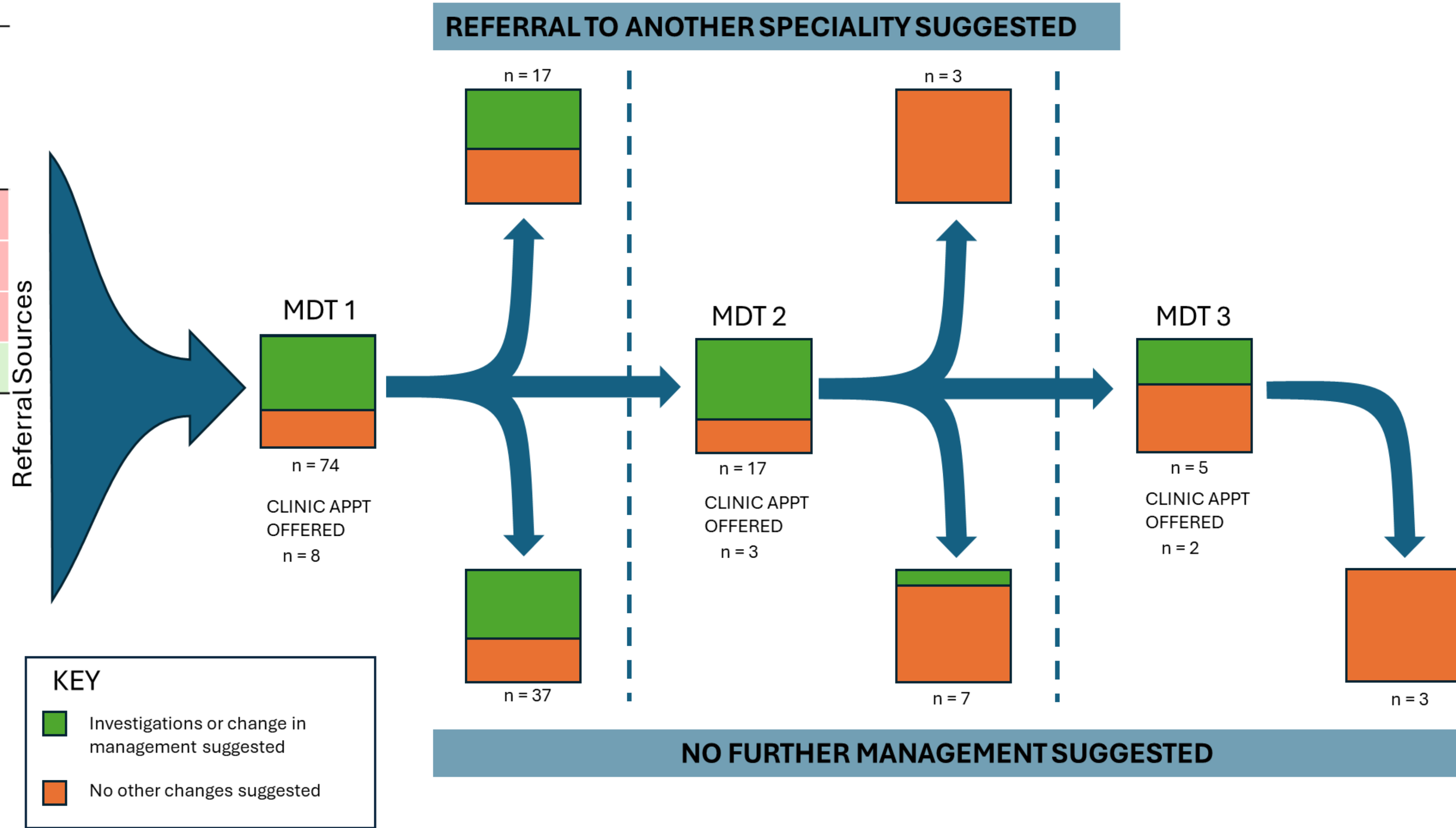


Fig. 4: Flow chart showing progress of referred patients through the Oxford CNS Antibody MDT. MDT # refers to the number of re-discussions for patients. The proportion of colour at each timepoint is correlated in area to the proportion of patients who were suggested additional investigations or a change in management. Note that, that some patients had more than one outcome, so numbers of referrals do not sum to total cases discussed (one case can follow multiple arrow paths)

RESULTS

- Most referrals were from Oxfordshire, Greater London and Hampshire (Fig. 1)
- Referred cases presented most commonly with acute psychosis, many having additional features. Only two cases had other autoimmune disease (Fig.2)
- 62% of referred patients had anti-neuronal membrane antibodies. Of these, they reflected expected prevalences. (Fig. 3)
- Case Cluster 2 was the most common presentation – 50% (Table 1)

DISCUSSION

- The MDT offers a diverse range of referred patients with case clusters having been formed (Table 1)

- BENEFITS**
- **Containment** – prevents over-investigation in patients, provides direction (Fig. 4)
 - **Clinical reassurance** – ½ of cases were suggested investigations with no further management (Fig. 4)
 - **Combined multi-specialty expertise**
 - **Framework for Neurologists and Psychiatrists working together**

- CHALLENGES**
- **Case complexity**
 - **Lack of clinical information**
 - **Systems issues e.g. performing LPs**
 - **Lack of follow-up (closing the loop)**