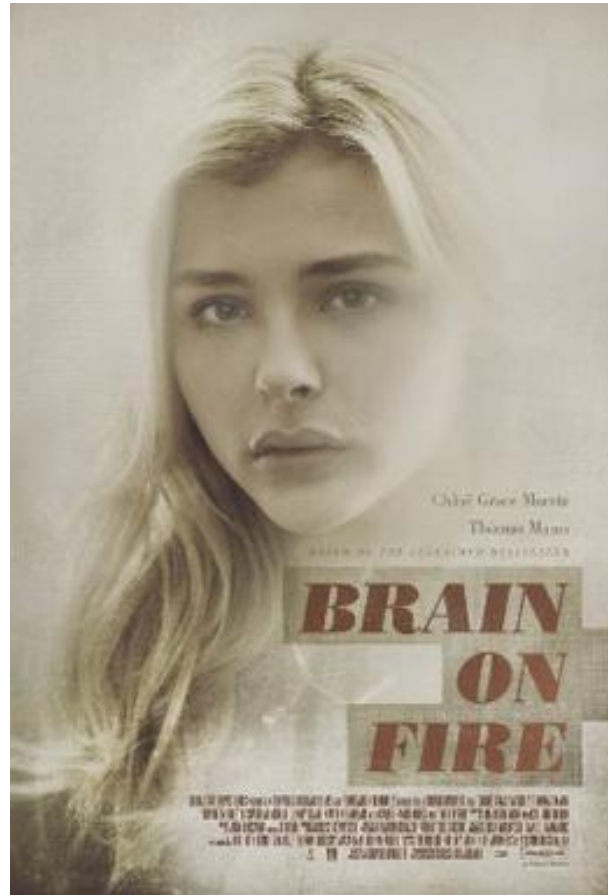


A decorative graphic featuring a dashed light blue line that forms a large, irregular circular shape. Various colored circles and rings are scattered around the line. In the top left, there is a large teal ring and a smaller teal circle. In the top right, there is a large lime green circle and a smaller green circle. In the bottom left, there is a large green circle with a white dot in the center, a smaller lime green circle, and a small orange circle. In the bottom right, there is a large yellow ring, a large orange circle, and a small pink circle.

Brain on Fire

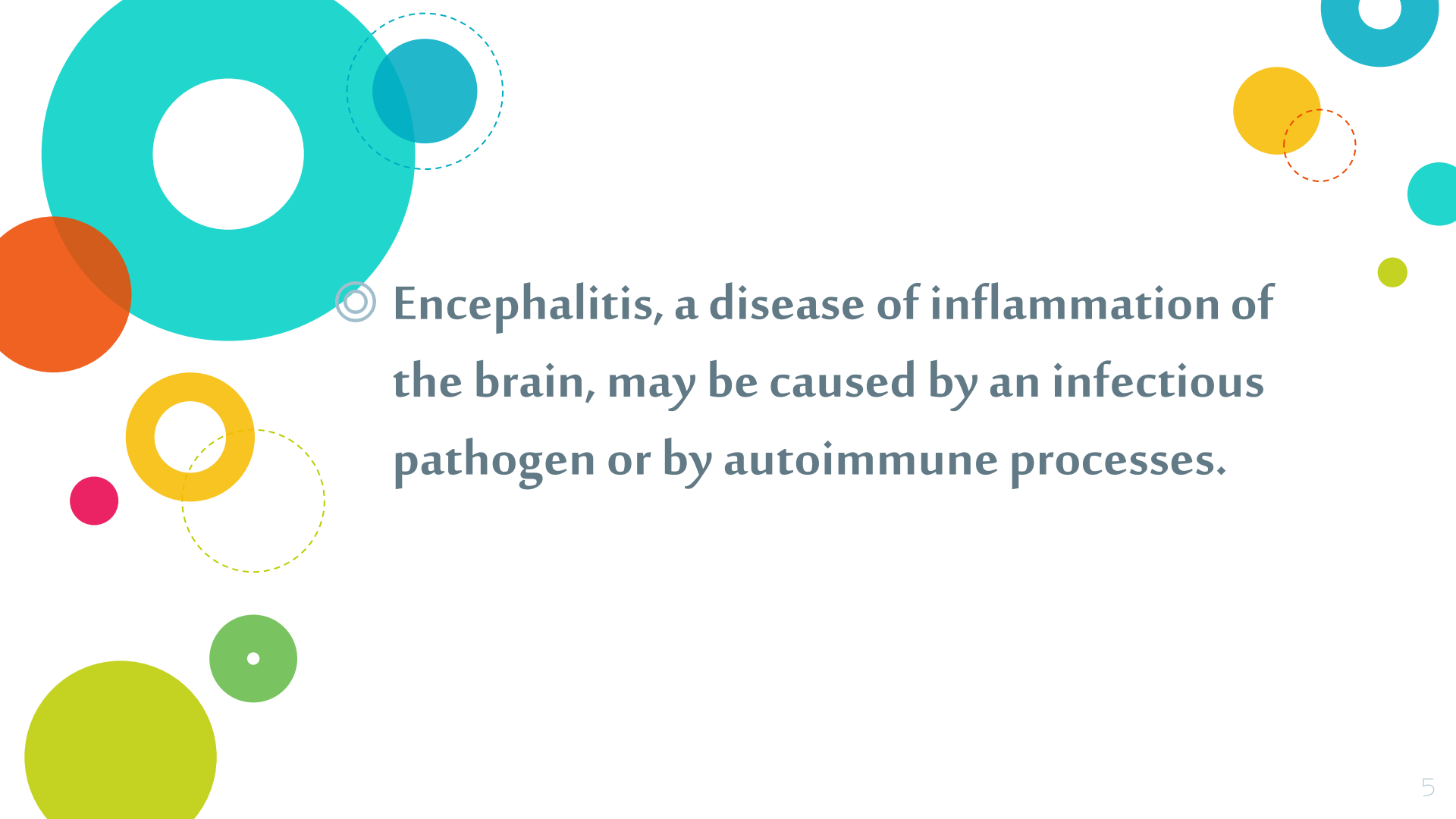




susannah cahalan : news reporter on New York Post



Syrian-American neurologist Souhel Najjar

- 
- ① Encephalitis, a disease of inflammation of the brain, may be caused by an infectious pathogen or by autoimmune processes.




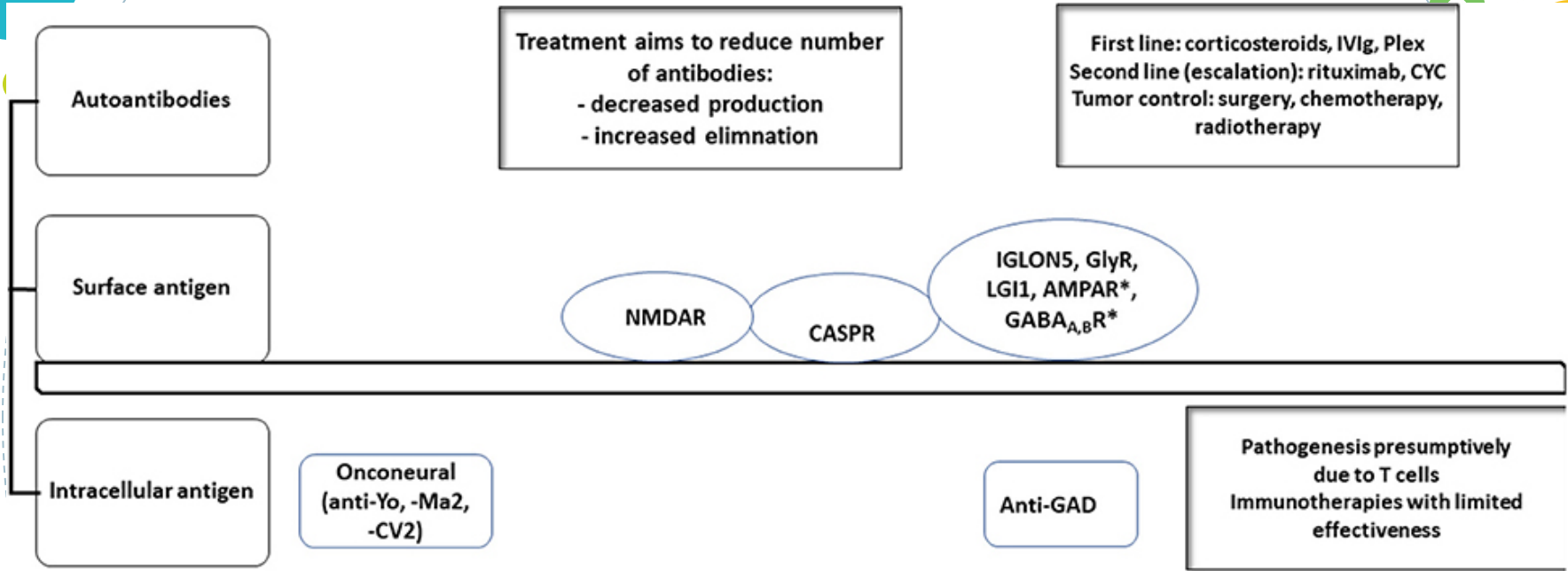
Autoimmune Encephalitis:

◎ **Paraneoplastic Encephalitis**

◎ **Non-Paraneoplastic Encephalitis**

◎ **Vasculitis and Vasculitis associated Encephalitis**





Probability of co-existing malignancy

*** High probability of co-existing malignancy reported in literature**

Box 1. Diagnostic criteria for possible autoimmune encephalitis⁶

Diagnosis can be made when all three of the following criteria have been met.

- Subacute onset (rapid progression of less than 3 months) of working memory deficits (short-term memory loss), altered mental status or psychiatric symptoms.
- At least one of the following:
 - new focal CNS findings
 - seizures not explained by a previously known seizure disorder
 - CSF pleocytosis
 - MRI features suggestive of encephalitis.
- Reasonable exclusion of alternative causes (eg HSV encephalitis).



Paraneoplastic :

- ◎ Limbic
- ◎ Diencephalon
- ◎ Brain Stem
- ◎ Encephalomyelitis

Non-Paraneoplastic AE

- Anti-NMDA Receptor Encephalitis
- Anti-GABA-B Receptor Encephalitis
- Anti-AMPA Receptor Encephalitis
- Anti-LGI1 Limbic Encephalitis
- Anti-CASPR2 Associated Encephalitis
- Anti-GABA-A Receptor Encephalitis
- Anti-DPPX Encephalitis
- Encephalitis with Antibodies to IgLON5
- Stiff-Person Spectrum Disorder and Antibodies to Glycine Receptors

Full-screen Snip

Vasculitis asso. encephalopathy

- Primary CNS vasculitis
- Secondary CNS vasculitis
 - SLE
 - Sjogren's
 - APLA syn
 - Behcet's
 - other - PAN, WG, CSS
- Uncertain etiology but responsive to immunotherapy
 - Neurosarcoidosis
 - Hypereosinophilic syndromes

Full-screen Slides

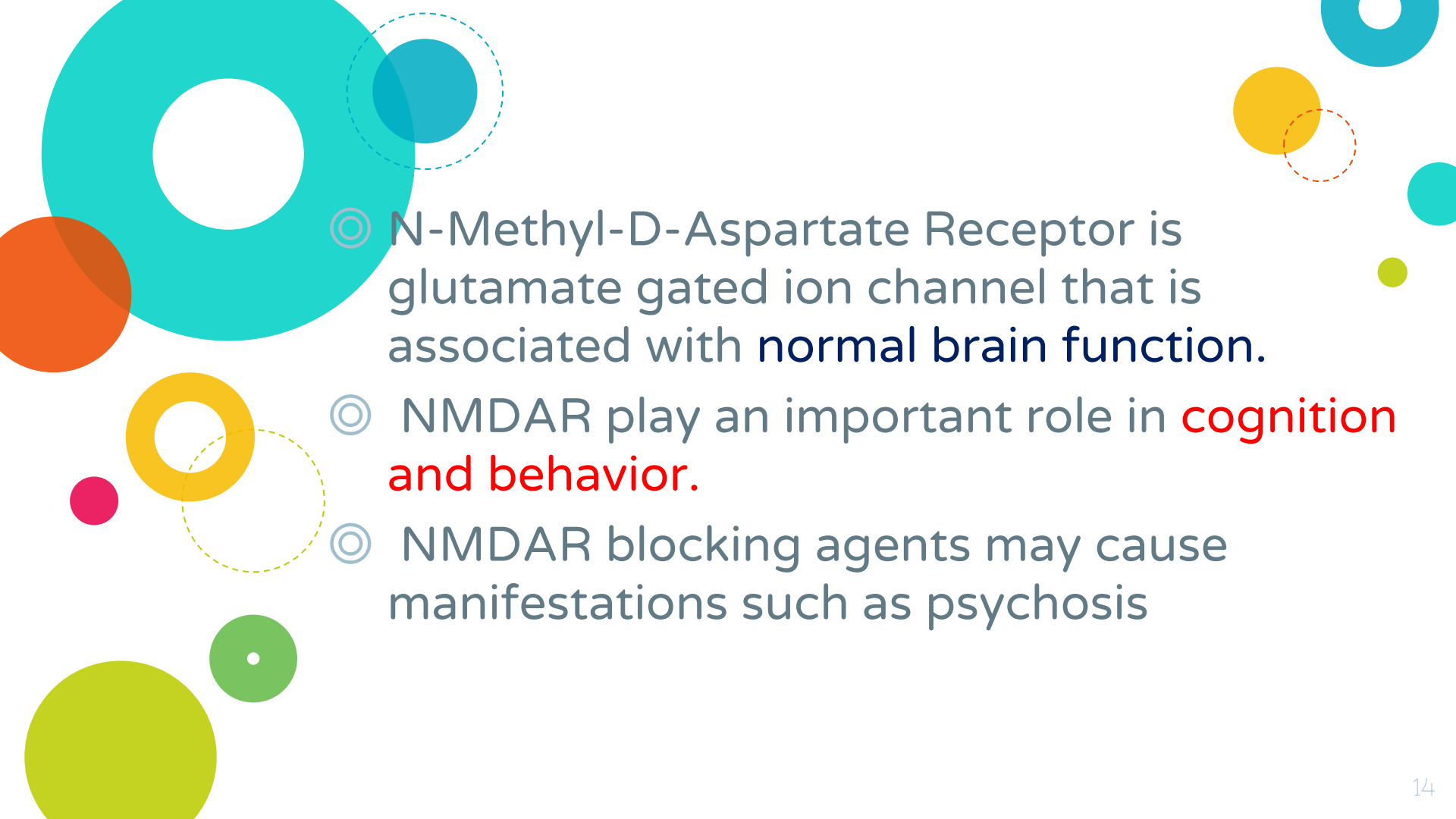
Table 1. Key features of syndromes associated with neuronal surface antibodies


Antibody	Demographics		Key distinguishing features	Tumour associations
	Age predominance	F:M ratio		
NMDAR	Children and adults <40 years	4:1	Psychiatric features followed by movement disorder (classically orofacial dyskinesia), seizures, encephalopathy and autonomic dysfunction	About 50% of female patients have ovarian teratoma; other tumour associations have been described
LGI1	Older adults	1:2	Faciobrachial dystonic seizures, amnesia, hyponatraemia	<10%: breast, lymphoma, thymoma, thyroid
CASPR2	Older adults	1:9	Sleep disorders (insomnia, sleep-wake cycle disturbance), peripheral nerve hyperexcitability, ataxia	<5%: various tumours
GABA_AR	Children or adults	1:1	Seizures	30%: thymoma
GABA_BR	Older adults	1:1.5	Seizures, amnesia	50%: SCLC
AMPA	Older adults	2:1	Amnesia	65%: breast, SCLC, thymoma
DPPX	Adults	1:2	Severe diarrhoea and weight loss, myoclonus, hyperekplexia	<10%: lymphoma

Anti N-Methyl-D-Aspartate (NMDA) receptor encephalitis: from psychosis to cognitive impairment

Zahra Vahabi^{1,2} | Farnaz Etesam³ | Atefeh Zandifar^{4,5}  | Fatemeh Alizadeh⁶ |
Rahim Badrfam^{7,8} 

¹Geriatric Department, Ziaei Hospital, Tehran University of Medical Sciences, Tehran, Iran

- 
- ◎ N-Methyl-D-Aspartate Receptor is glutamate gated ion channel that is associated with **normal brain function.**
 - ◎ NMDAR play an important role in **cognition and behavior.**
 - ◎ NMDAR blocking agents may cause manifestations such as psychosis

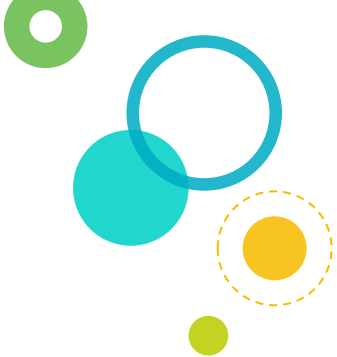


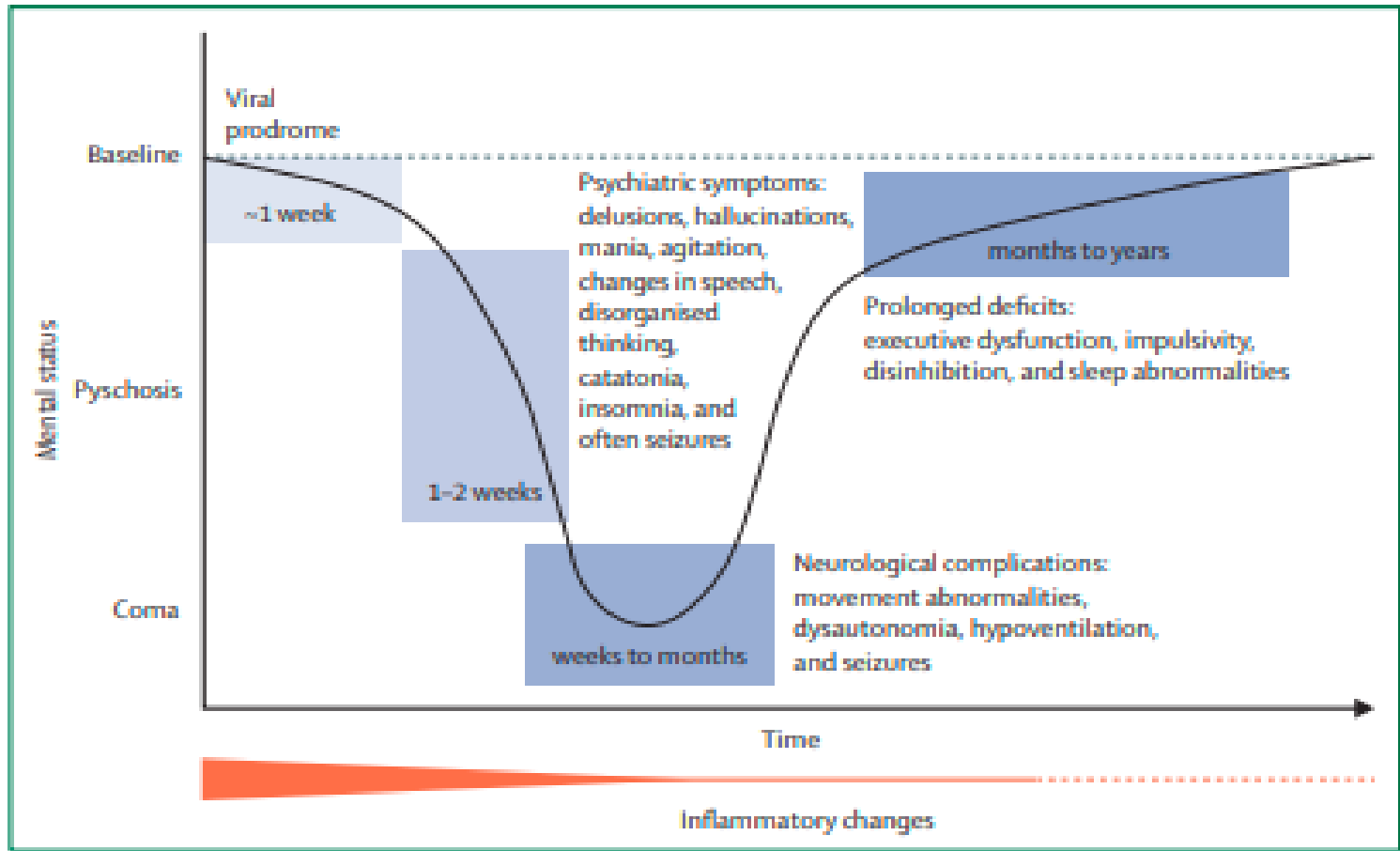
© 111 adult patients noted that 65 (59%) initially presented with psychiatric symptoms:
including visual or auditory hallucinations in 26 (40%),
acute schizoaffective episodes in 15 (23%), depression in 15 (23%), mania in 5 (8%) and addictive or eating disorders in 4 (6%).



NMDR antibody

- ⊙ Sleep disorders
- ⊙ Excitement
- ⊙ Seizure
- ⊙ Movement d
- ⊙ Rapid onset
- ⊙ Agitation
- ⊙ Speech /mutism
- ⊙ Children

- ⊙ Memory
 - ⊙ Negative /positive
 - ⊙ Fluctuation
catatonia
 - ⊙
- 



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Public Health Emergency COVID-19 Initiative

[Brain Behav Immun.](#) 2020 Jul; 87: 179–181.

Published online 2020 May 23. doi: [10.1016/j.bbi.2020.05.054](https://doi.org/10.1016/j.bbi.2020.05.054)

PMCID: PMC7255176

PMID: [32454137](https://pubmed.ncbi.nlm.nih.gov/32454137/)

Anti-NMDA receptor encephalitis in a psychiatric Covid-19 patient: A case report

[Adelaide Panariello,^a](#) [Roberta Bassetti,^a](#) [Anna Radice,^a](#) [Roberto Rossotti,^b](#) [Massimo Puoti,^b](#) [Matteo Corradin,^c](#) [Mauro Moreno,^c](#) and [Mauro Percudani^{a,*}](#)

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The background features a white space with a large, faint, light blue dashed circle. Various colorful shapes are scattered around: a large teal ring in the top left, a smaller teal circle next to it, a lime green circle in the top right, a green circle with a dashed outline below it, a pink circle in the middle right, an orange circle below that, a yellow ring in the bottom right, a lime green circle in the bottom left, a green circle with a white dot below it, and a small orange circle to its right. A dashed yellow circle is also visible on the left side.

Thanks