

# Most Common Treatments in Patients with Treatment Resistant Depression Based on European Cohort Study Real-World Evidence

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## OBJECTIVES

- To report the most commonly received treatments at baseline in the Treatment Resistant Depression Cohort in Europe (EOTC).

## BACKGROUND

- Treatment resistant depression (TRD) is generally defined as failure to respond to at least two different treatments with antidepressants, received at an adequate dose for adequate duration, in the same major depressive episode.<sup>1</sup>
- TRD affects 10–30% of patients with major depressive disorder,<sup>2–4</sup> and carries with it a significant unmet need.<sup>5,6</sup>
- The EOTC study aimed to examine treatment patterns and outcomes among TRD patients in Europe, providing real-world data on the burden of disease.

## METHODS

- A prospective, multicentre, observational cohort study of adults with TRD in Europe was conducted (NCT03373253; **Figure 1**).<sup>7</sup>
- At baseline, patients had a Montgomery-Åsberg Depression Rating Scale score  $\geq 20$ , had failed at least two different oral antidepressant treatments and were initiating a new treatment for depression.
- Medical records, clinician-rated scales and patient-reported questionnaires were used to collect patient characteristics and medical history.
- For patients receiving combination or augmentation therapies (**Figure 2**), all ongoing pharmacological treatments were recorded at baseline.

## RESULTS

- In total, 411 patients were included, reporting 54 different pharmacological treatments used at baseline either as monotherapy, or as part of combination or augmentation therapy.
- At baseline, the mean duration of the current major depressive episode was 2.6 years (136.3 weeks), and the mean number of previous episodes was 3.4; as per the inclusion criteria, all patients had moderate or severe depression at baseline (**Table 1**).
- Nine different medications were received by  $\geq 10\%$  of patients: venlafaxine (24.8%), mirtazapine (21.2%), quetiapine (14.1%), bupropion (14.1%), duloxetine (14.1%), vortioxetine (13.1%), sertraline (10.9%), escitalopram (10.9%) and trazodone (10.2%; **Figure 3**).
- Of these, all were oral antidepressants except quetiapine, an antipsychotic.
- Of the eight oral antidepressants received by  $\geq 10\%$  of patients, two were selective serotonin reuptake inhibitors (sertraline and escitalopram), two were serotonin norepinephrine reuptake inhibitors (venlafaxine and duloxetine), and four were recorded as 'other' (trazodone, bupropion, mirtazapine and vortioxetine).

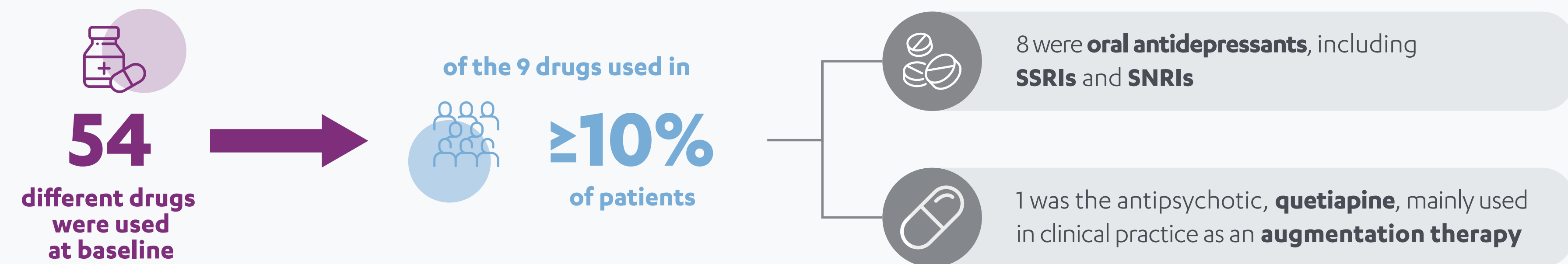
## CONCLUSIONS

In this study, the pharmacological treatments used at baseline were heterogeneous, reflecting the heterogeneity of TRD and its treatment.

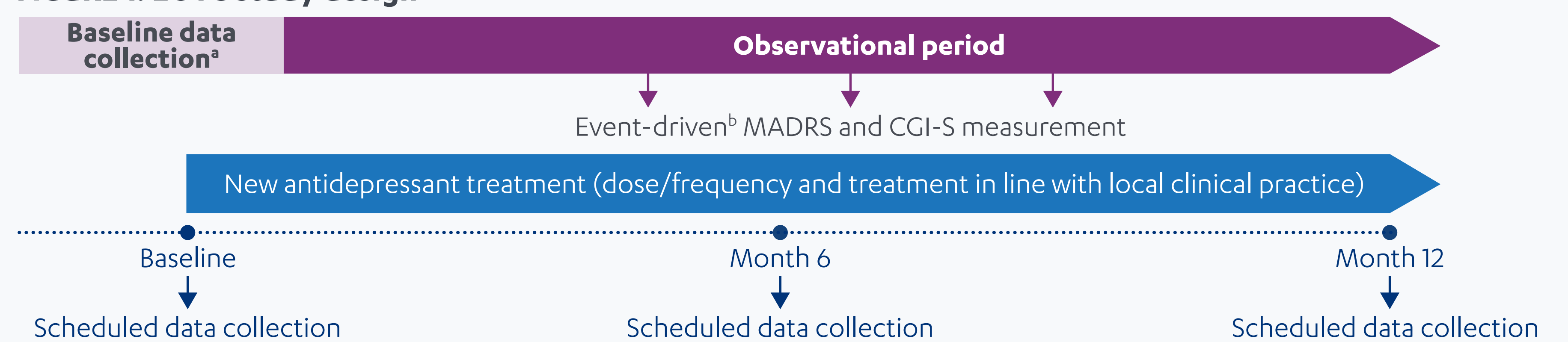
The most commonly received treatments were predominantly oral antidepressants.

However, the third most received treatment was quetiapine, mainly used in clinical practice as an augmentation therapy, suggesting it is a routine treatment for patients with TRD.

### SUMMARY

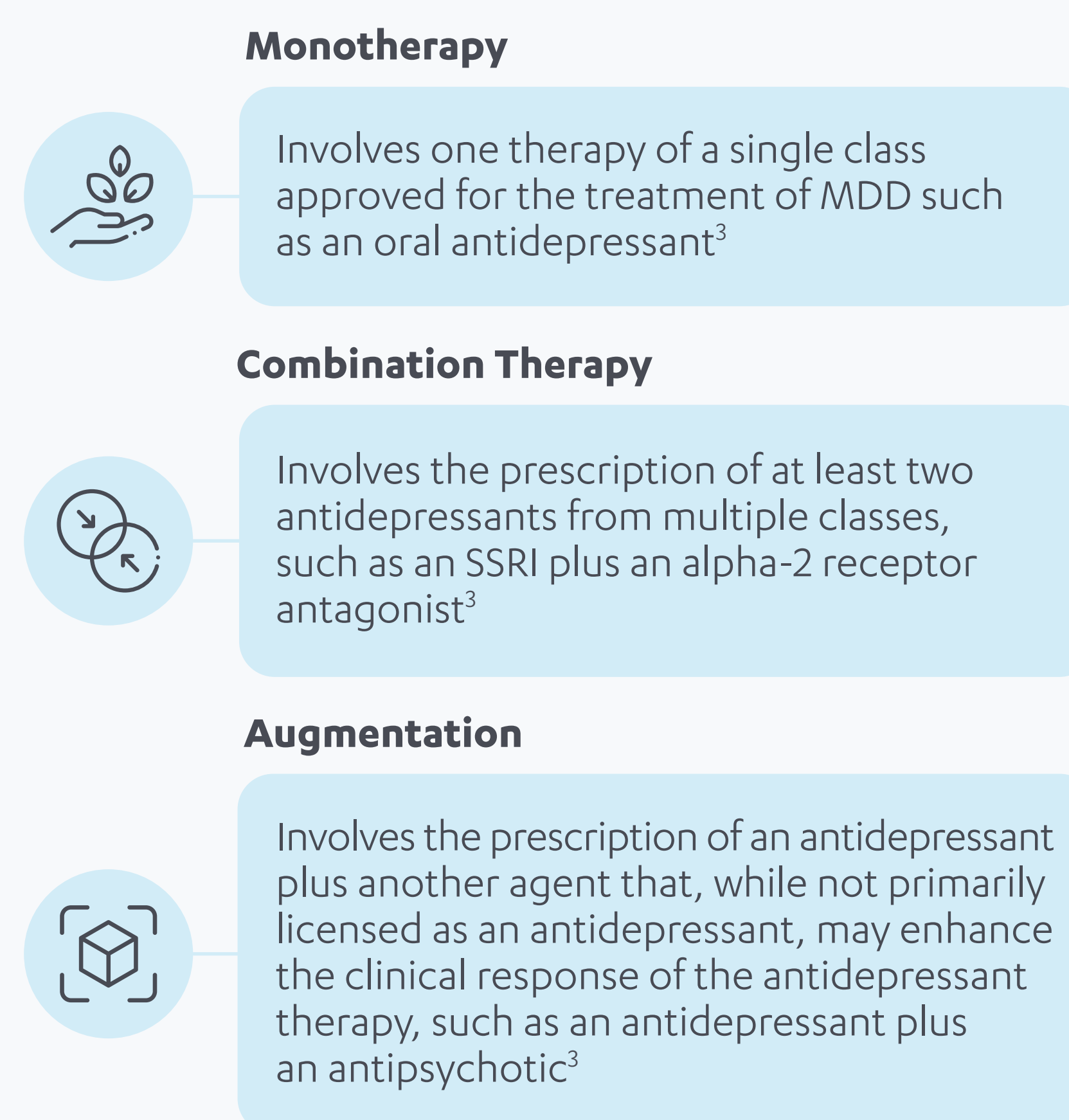


### FIGURE 1. EOTC study design



<sup>a</sup>Baseline data were documented  $\pm 14$  days of baseline date (on which new treatment was started). <sup>b</sup>Any clinically relevant worsening/improvement in the current major depressive episode. CGI-S: Clinical Global Impression-Severity; EOTC: European Observational TRD Cohort; MADRS: Montgomery-Åsberg Depression Rating Scale; TRD: treatment resistant depression.

### FIGURE 2. TRD treatment strategies



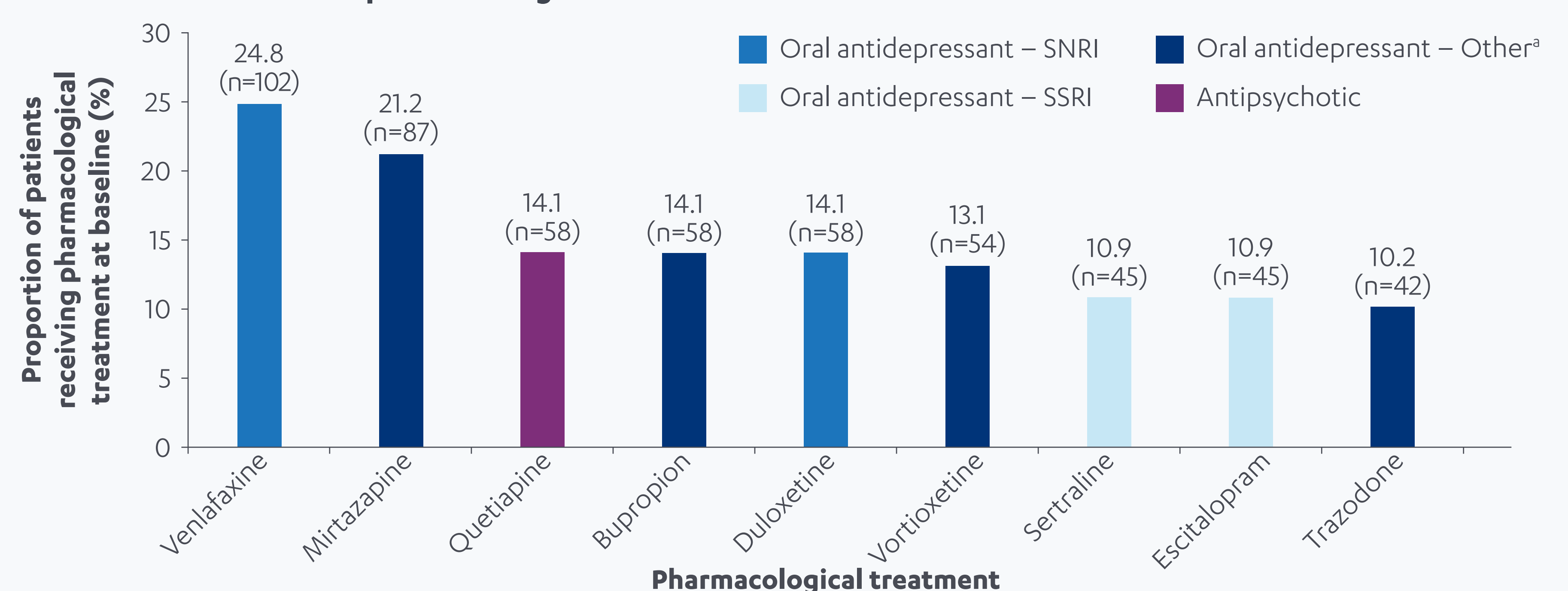
MDD: major depressive disorder; SSRI: selective serotonin reuptake inhibitor; TRD: treatment resistant depression.

### TABLE 1. Baseline characteristics

| Mean (SD), unless otherwise stated                     | All patients (N=411) |
|--|----------------------|
| <b>Socio-demographics</b>                              |                      |
| Age, years   | 51.0 (10.8)          |
| Female patients, % (n)                                 | 62.3 (256)           |
| <b>Psychiatric and medical history</b>                 |                      |
| Age at diagnosis of MDD, years                         | 37.2 (13.1)          |
| Years since MDD diagnosis                              | 13.7 (11.2)          |
| Number of previous episodes                            | 3.4 (5.6)            |
| Duration of current MDE, weeks                         |                      |
| Mean   | 136.3 (203.8)        |
| Median (min, max)                                      | 69.6 (10–2,242)      |
| <b>Clinical characteristics</b>                        |                      |
| MADRS total score                                      | 31.8 (6.0)           |
| Depression severity: <sup>a</sup> MADRS score category |                      |
| Severe, % (n)  | 32.6 (134)           |
| Moderate, % (n)  | 67.4 (277)           |

<sup>a</sup>Severe depression was defined as a MADRS score  $>34$ ; moderate depression was defined as a MADRS score of 20–34. MADRS: Montgomery-Åsberg Depression Rating Scale; MDD: major depressive disorder; MDE: major depressive episode; SD: standard deviation.

### FIGURE 3. Most common pharmacological treatments



Some drugs were received in combination; therefore, the total is greater than 100%. Figure includes all pharmacological treatments received by  $\geq 10\%$  of patients at baseline. <sup>a</sup>Other<sup>a</sup> includes oral antidepressants not classed as an SNRI or SSRI, such as tetracyclic antidepressants or serotonin modulators. SNRI: serotonin norepinephrine reuptake inhibitor; SSRI: selective serotonin reuptake inhibitor.

**ABBREVIATIONS:** CGI-S: Clinical Global Impression-Severity; EOTC: European Observational TRD Cohort; MADRS: Montgomery-Åsberg Depression Rating Scale; MDD: major depressive disorder; MDE: major depressive episode; SD: standard deviation; SNRI: serotonin norepinephrine reuptake inhibitor; SSRI: selective serotonin reuptake inhibitor; TRD: treatment resistant depression; UK: United Kingdom.

**REFERENCES:** <sup>1</sup>European Medicines Agency, 2013. Guideline on clinical investigation of medicinal products in the treatment of depression. EMA/CHMP/185423/2010 Rev 2. [https://www.ema.europa.eu/en/documents/scientific-guideline/guideline-clinical-investigation-medicinal-products-treatment-depression\\_en.pdf](https://www.ema.europa.eu/en/documents/scientific-guideline/guideline-clinical-investigation-medicinal-products-treatment-depression_en.pdf) (accessed 18 August 2022); <sup>2</sup>Jaffe DH et al. BMC Psychiatry 2019;19:247; <sup>3</sup>Al-Harbi KS et al. Patient Prefer Adherence 2012;6:369–88; <sup>4</sup>Voineskos D et al. Neuropsychiatr Dis Treat 2020;16:221–34; <sup>5</sup>Popova V et al. Am J Psychiatry 2019;176:428–38; <sup>6</sup>Daly EJ et al. JAMA Psychiatry 2019;76:893–903; <sup>7</sup>Heerlein K et al. J Affect Disord 2021;283:115–22. **DISCLOSURES:** KH, YG, KY, SMH, TI, CvH: Employees of Janssen EMEA. **ACKNOWLEDGEMENTS:** Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: KH, YG, KY, SMH, TI, CvH; Drafting of the publication, or revising it critically for important intellectual content: KH, YG, KY, SMH, TI, CvH; Final approval of the publication: KH, YG, KY, SMH, TI, CvH. We would like to thank the patients and their caregivers in addition to all the investigators and their teams who contributed to this study. The authors acknowledge Emma Francis Gregory, BA, Costello Medical, Cambridge, UK and Carolyn Walsh, PhD, Costello Medical, London, UK for medical writing and editorial assistance, and the Costello Medical Design Team for design support. This study was funded by Janssen EMEA. All costs associated with development of this presentation were funded by Janssen EMEA.

