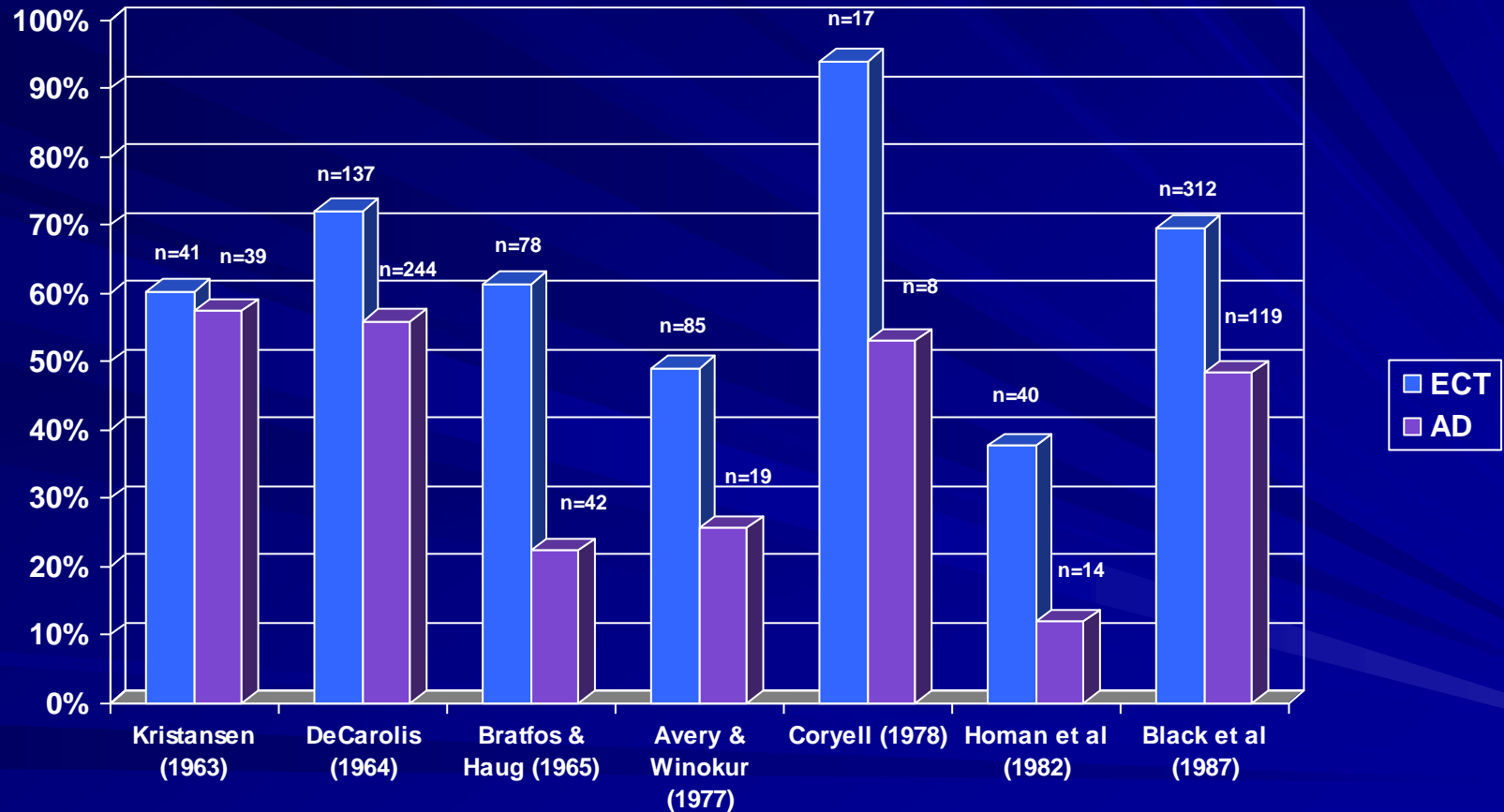
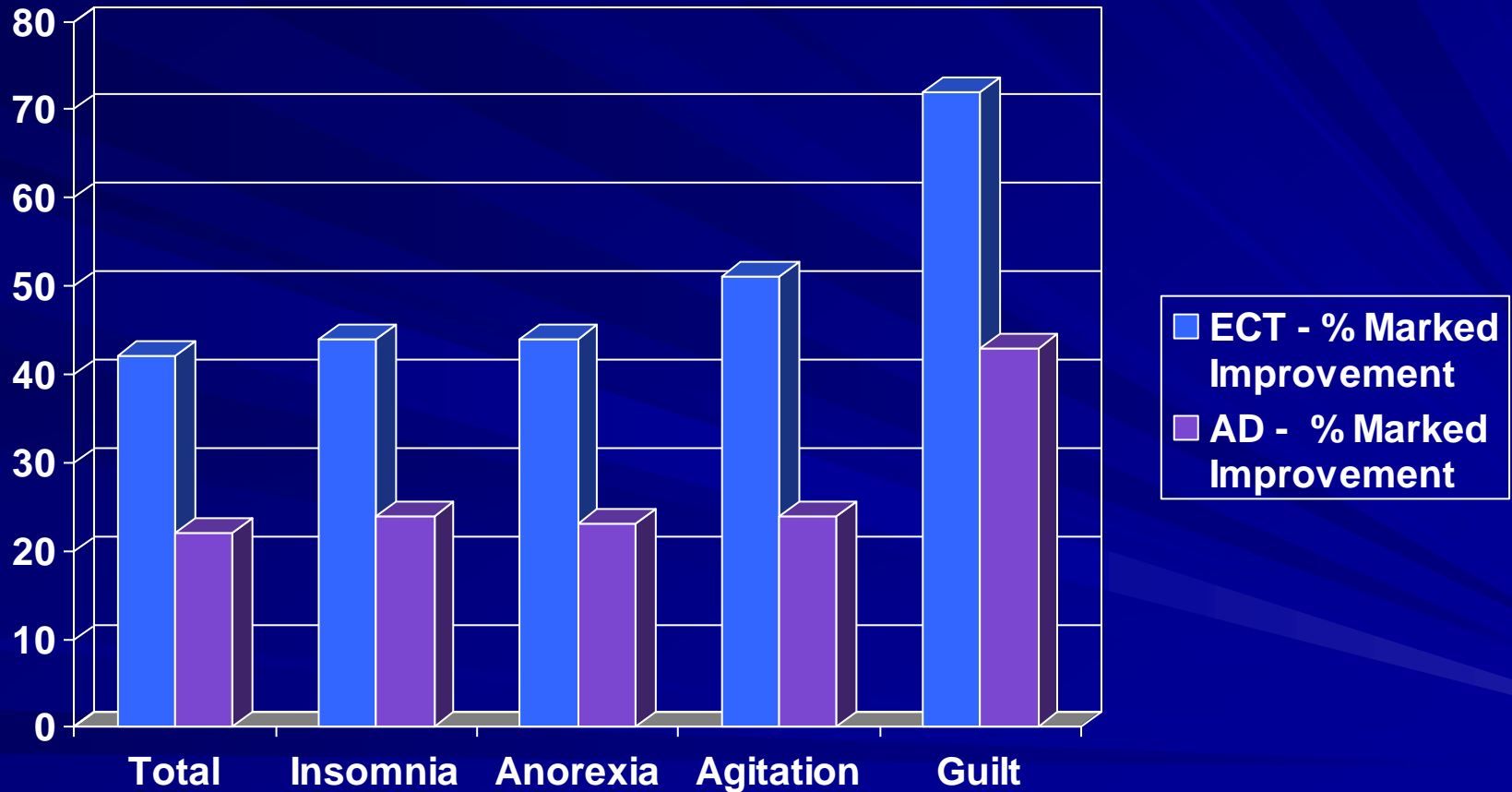


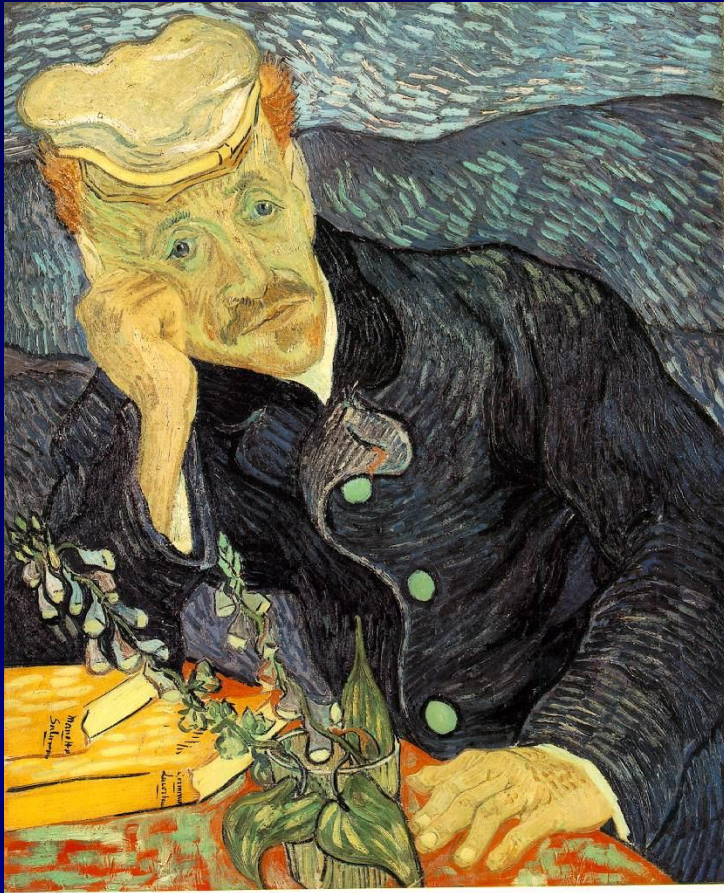
Rate of Response of ECT and Antidepressants in Randomized Controlled Trials



Relative Efficacy of ECT vs. Antidepressants in Symptom Response



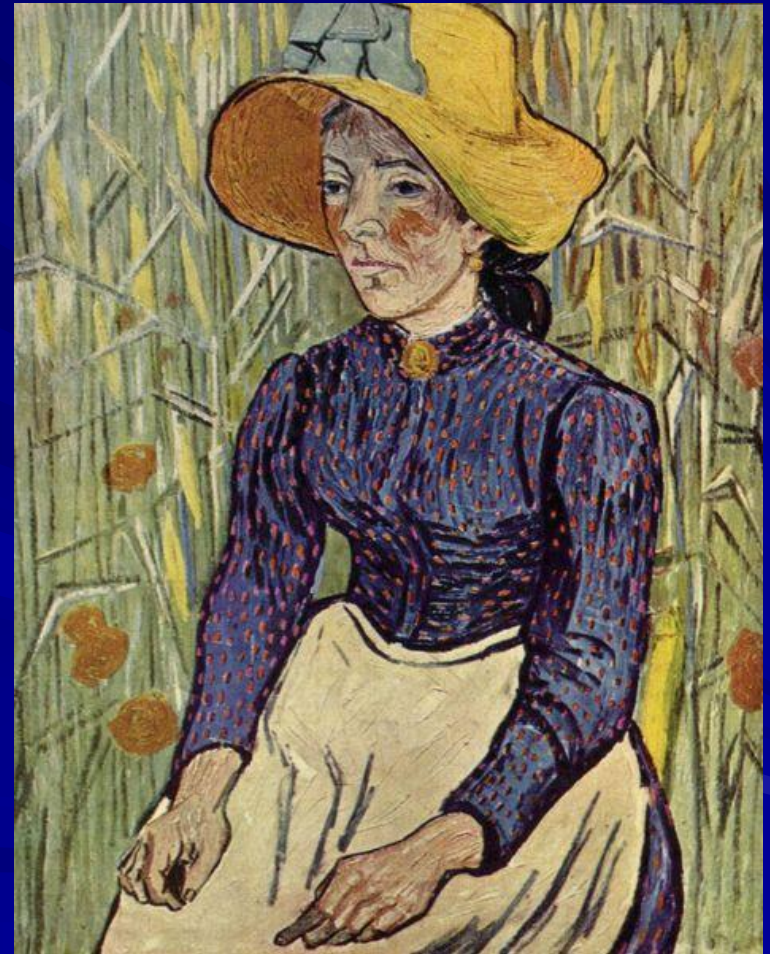
Predictors of Good Outcome in ECT



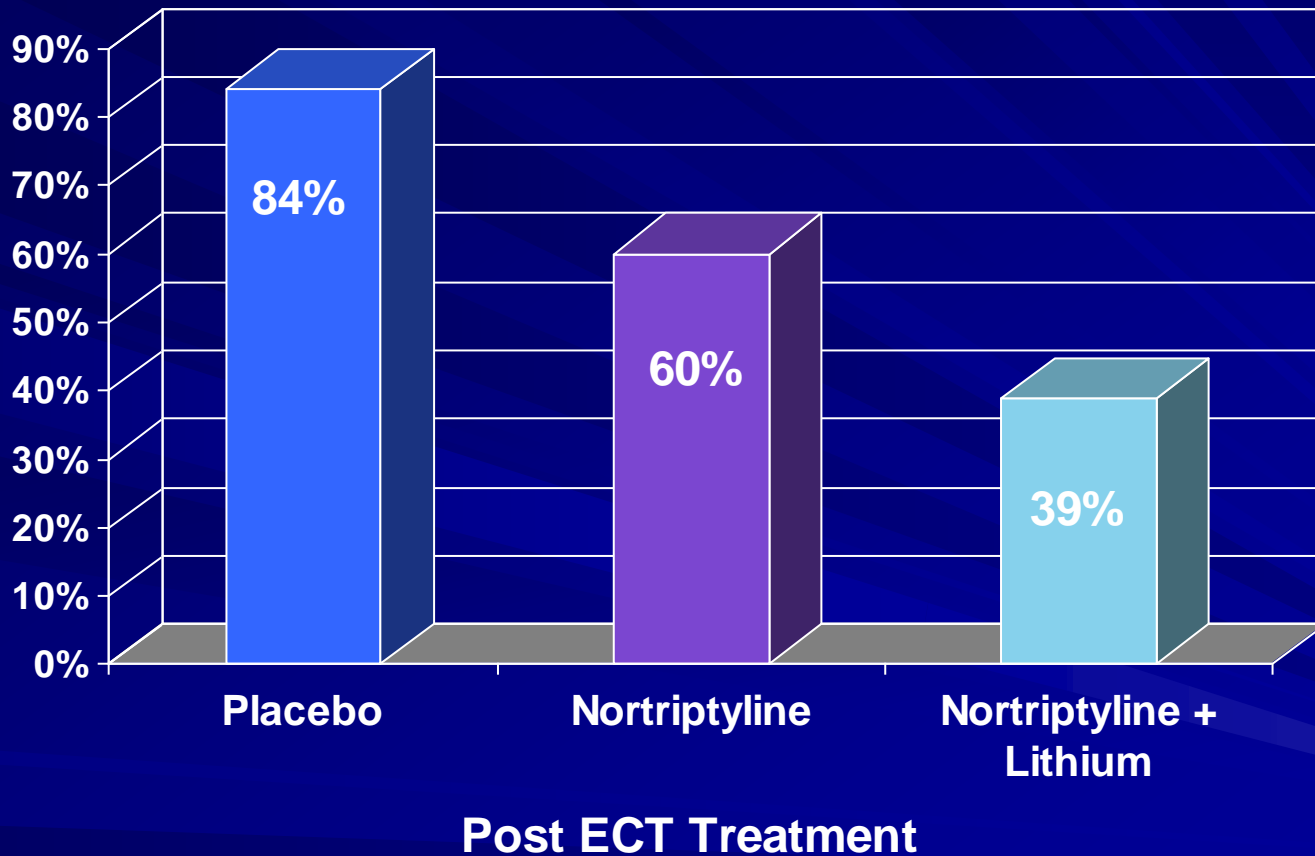
- Acute onset
- Age over 50 years
- Psychosis (delusions) prominent
- Vegetative signs severe
- Severe starvation and >10% weight loss
- Acute suicide risk
- Catatonia
- Stupor
- Delirium
- Previous good response to ECT

Predictors of Poor Outcome in ECT

- Character pathology prominent (Axis II DSM)
- Prolonged illness (chronicity)
- “Neurotic signs” prominent
 - Anxiety
 - Somatization
- Comorbid alcoholism, substance abuse
- Lack of response to tricyclic antidepressants



Relapse After ECT



Suicide and ECT

- Suicide is a major, preventable health problem
- Suicide in 2004
 - 32,439 deaths
 - 11th leading cause of death
 - Overall rate is 10.9 per 100,000
 - 14.3 per 100,000 age 65 and over
 - Estimated 8 to 25 attempts per completed suicide
- ECT reduces suicide risk and suicidal drive

Efficacy of ECT in Major Depression

Findings from the
Consortium for Research in
ECT (CORE) Study

The CORE Study



TRIAL DESIGN

Acute Phase (Phase I): *Thrice Weekly ECT*

Remitters

HAM-D \leq 10 & HAM-D Reduction \geq 60%

Interim Week

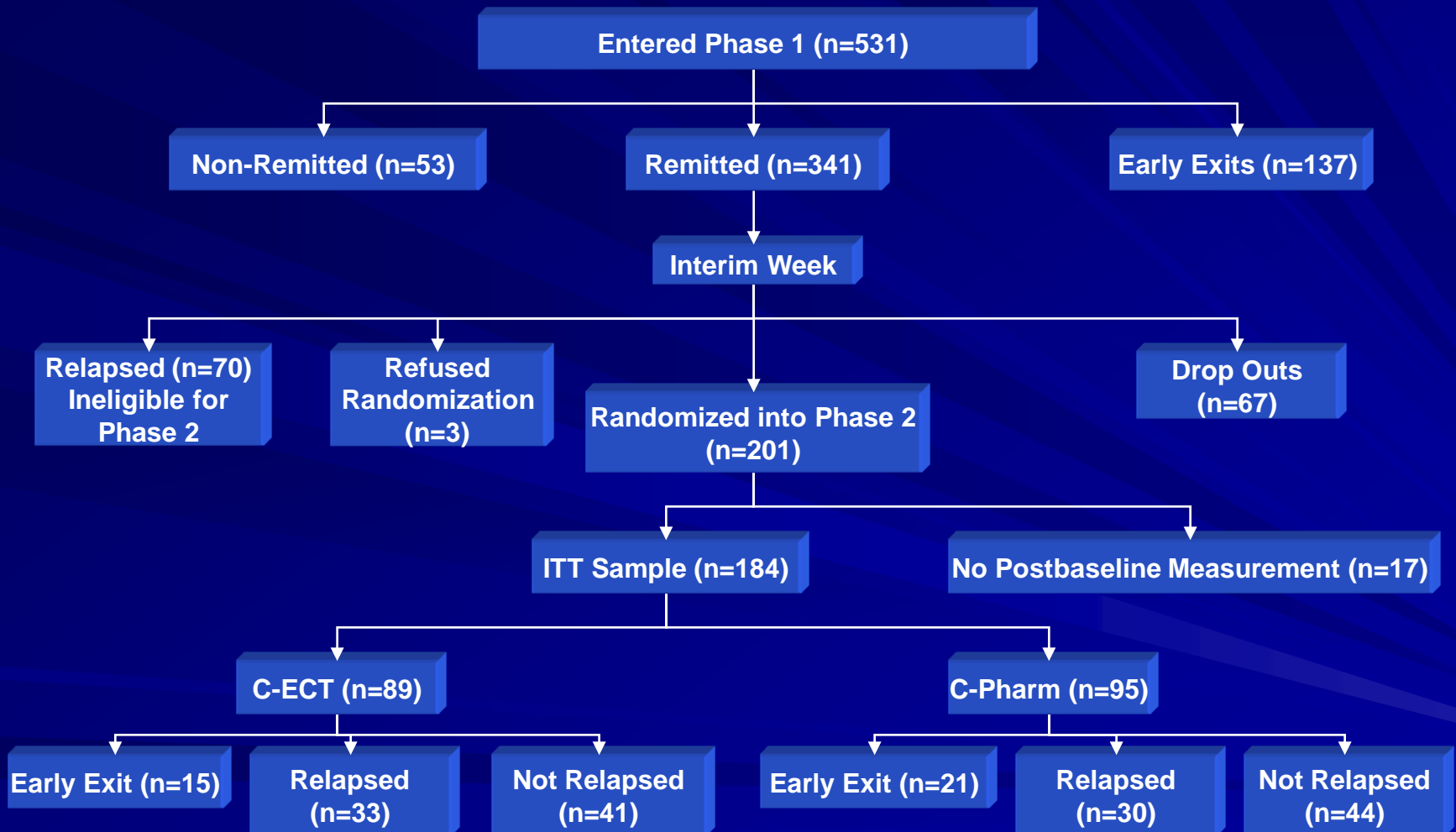
Remain Remitted for 1 Week

Randomized Phase (Phase II): *Randomized to:*

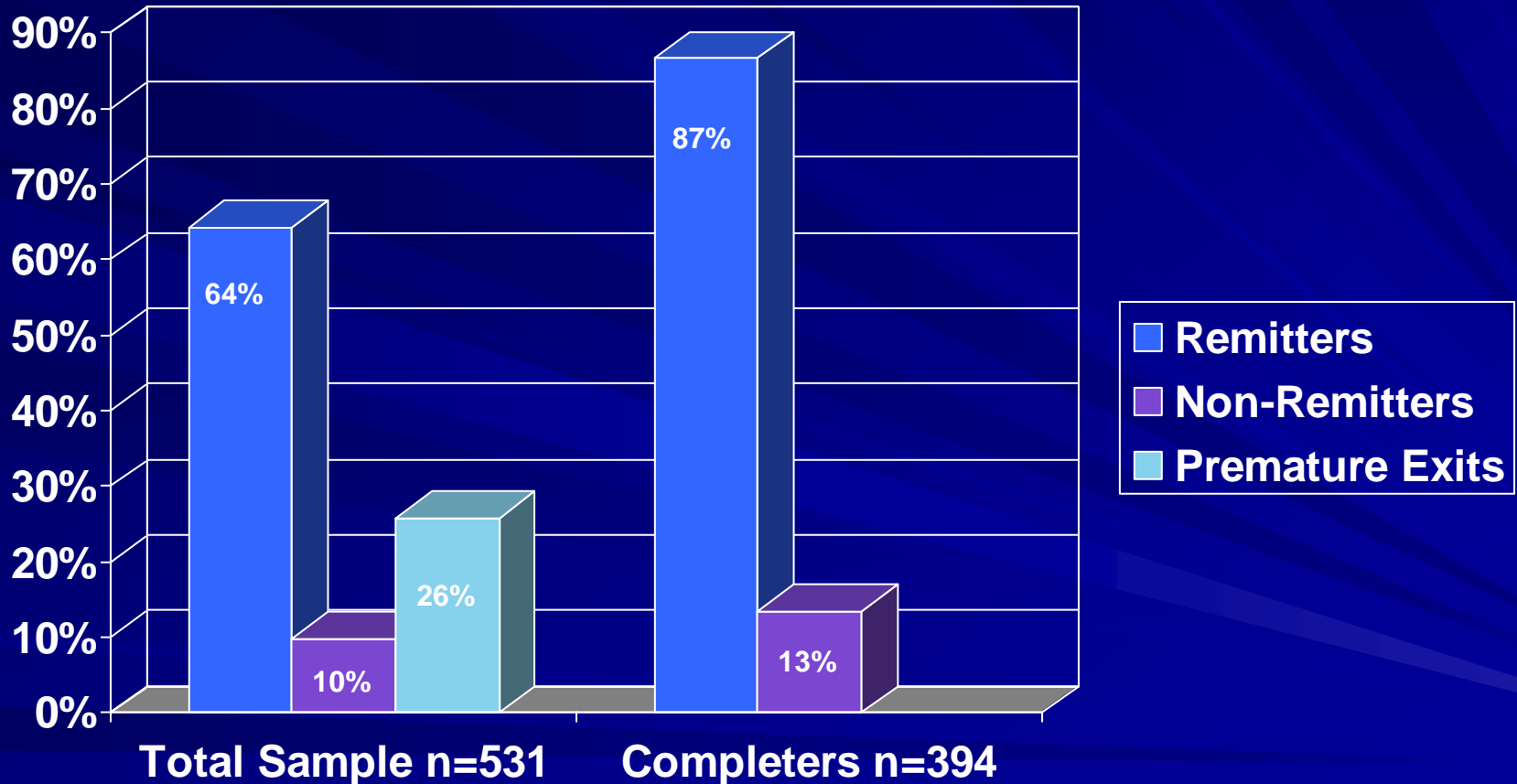
Continuation
ECT

Continuation Pharmacotherapy
(*lithium + nortriptyline*)

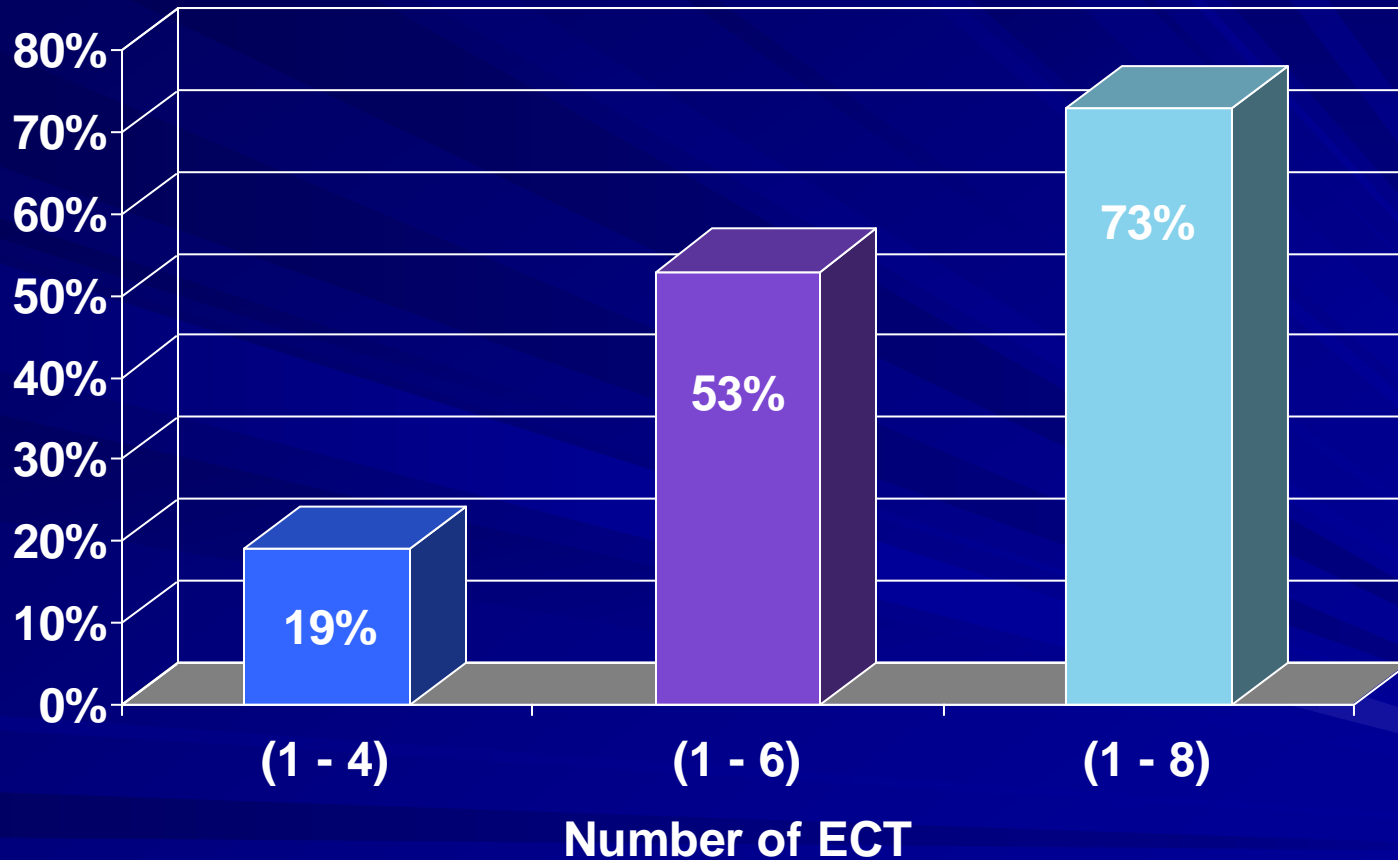
CORE C-ECT vs. C-Pharm Results



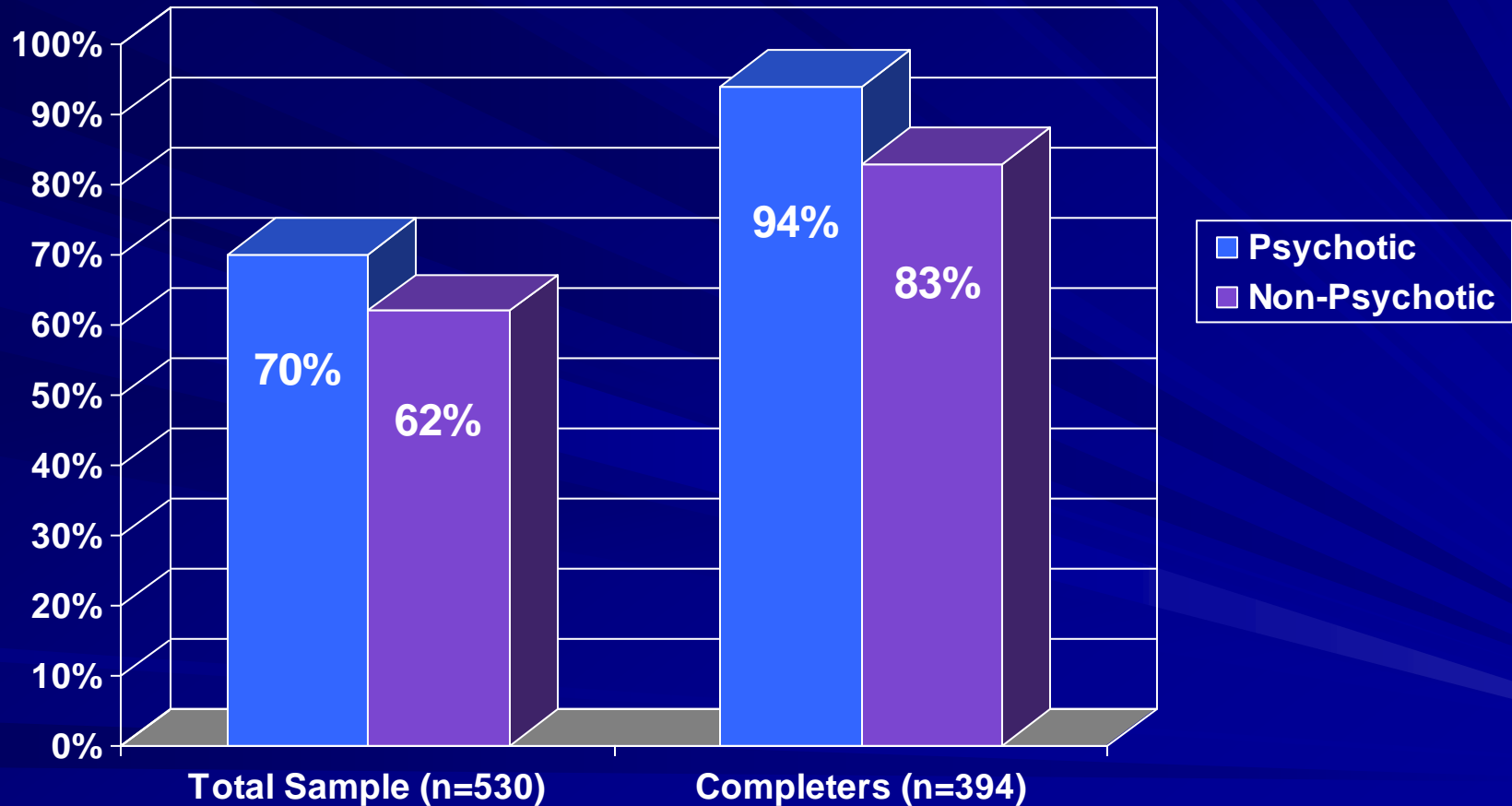
Response Status for Patients Entering and Completing Acute Phase



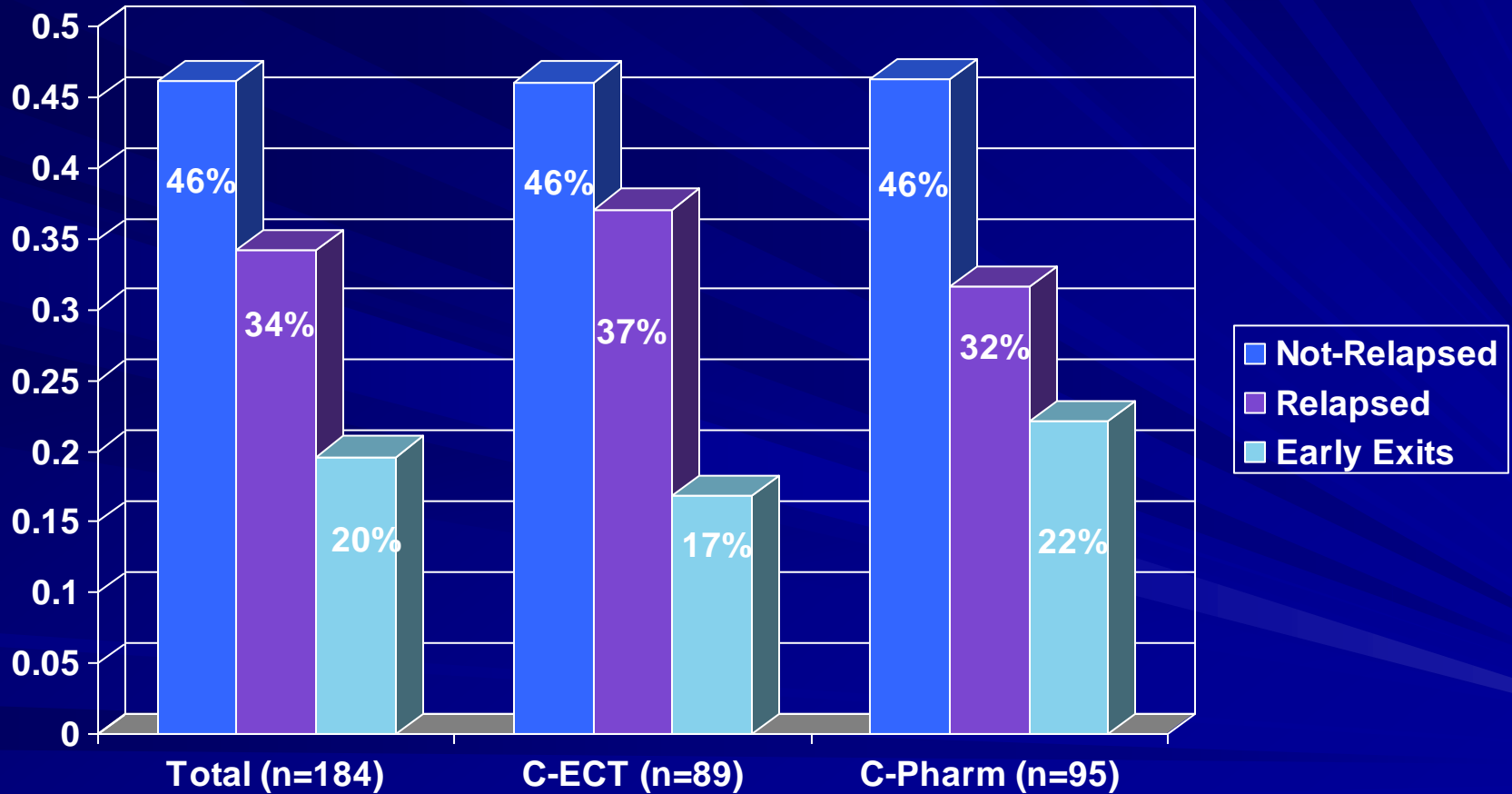
Proportion of Patients Remitting by ECT Number



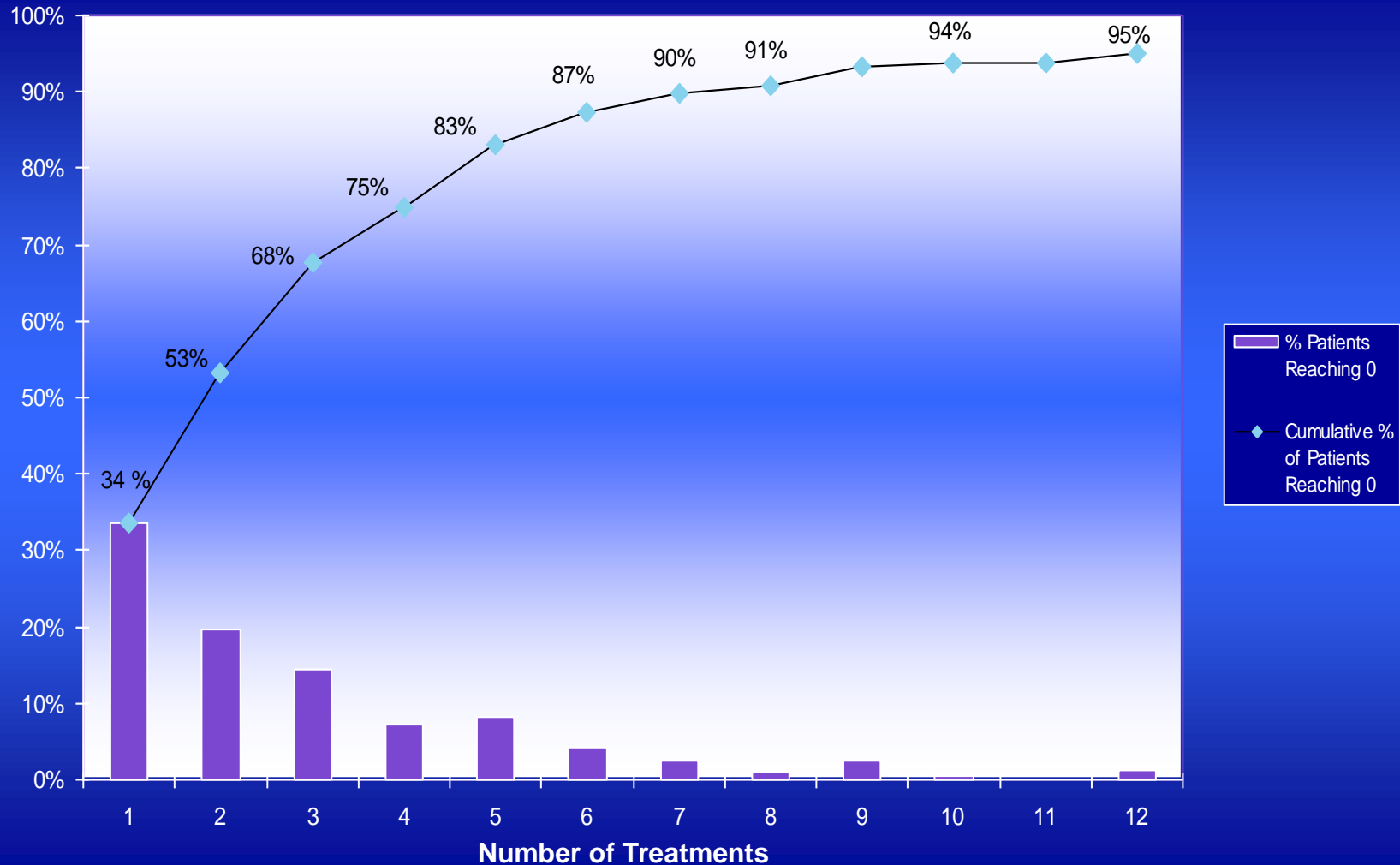
Remission Rates for Psychotic and Non-Psychotic Patients



Relapse Status at 6 Months



Number of ECT Needed to Resolve Suicide Risk Among All Patients with Baseline Self-Rating ≥ 2



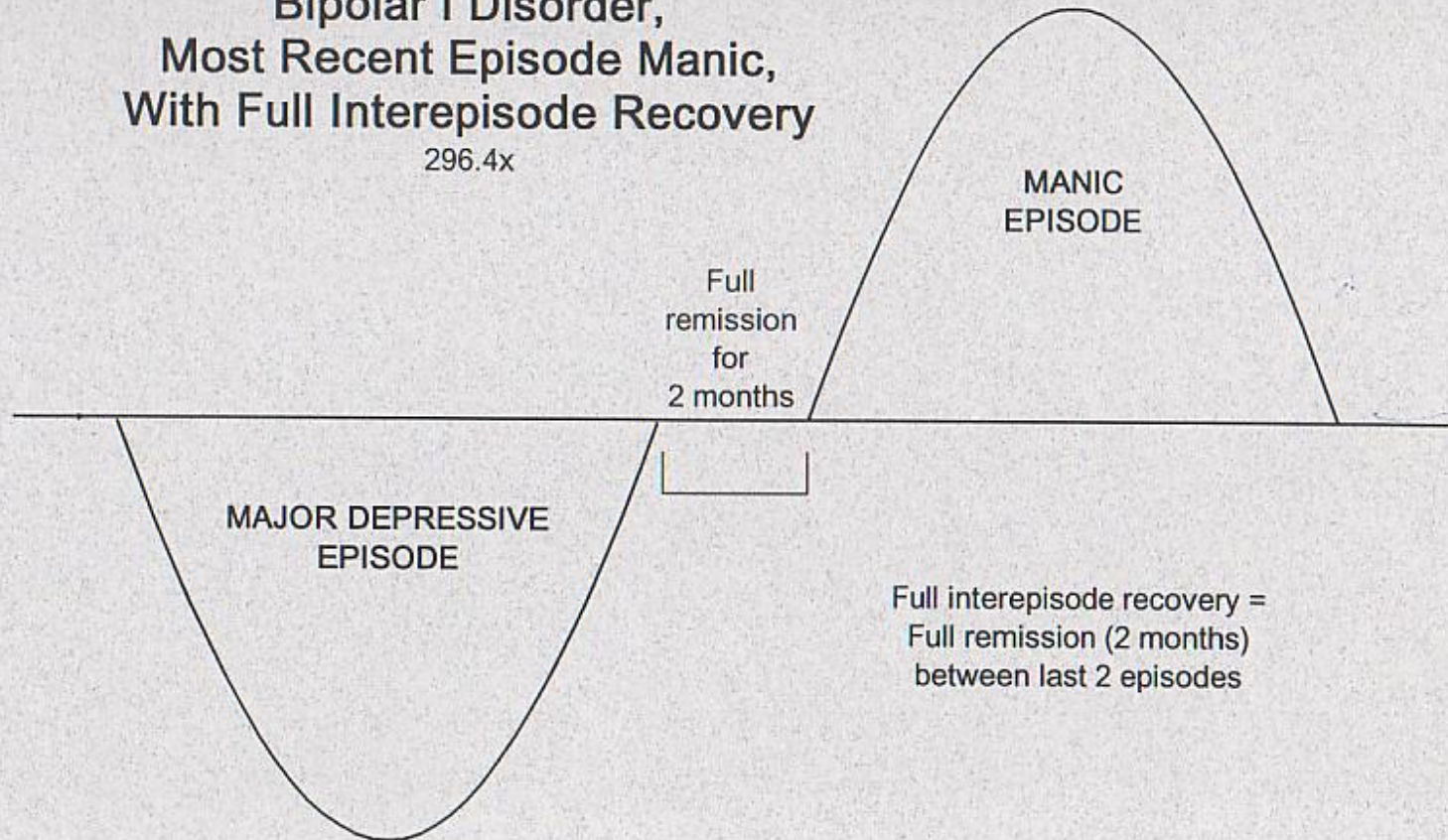
Conclusions

- Bilateral ECT results in high remission rates
- Psychotic depression responds particularly well to ECT
- Continuation ECT is an effective alternative to pharmacotherapy for relapse prevention

Mania

Bipolar I Disorder,
Most Recent Episode Manic,
With Full Interepisode Recovery

296.4x



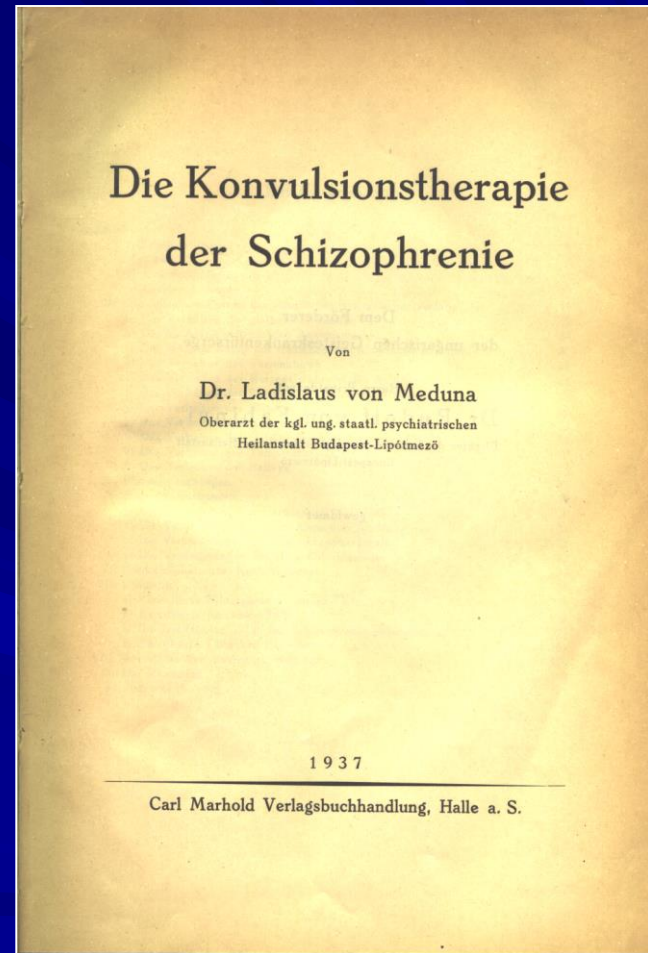
10

Mania

- ECT effective in acute mania
 - 70-80% of patient achieve remission or marked improvement
 - Clinical trials with anti-manic agents report non-response rates over 30%
 - Substantial number of medication-resistant patients benefit from ECT
- ECT generally reserved for those who do not respond to medications
 - American and Canadian Psychiatric Associations consider ECT 2nd-line treatment
 - Except when rapid-onset of action is needed
 - There is still a paucity of evidence about the comparative efficacy of ECT and treatment options for mania

Schizophrenia

- Currently, usually reserved for patients with treatment-resistant schizophrenia
 - There is evidence that combination of ECT and antipsychotic medications is more efficacious than either alone
 - Main benefit seems to be an acceleration of treatment response



Schizophrenia

- Patients with psychotic exacerbations and short episode duration are more likely to benefit
- Features predictive of good outcomes
 - Prominent delusions and hallucinations
 - Fewer premorbid schizoid personality traits
 - Presence of catatonic symptoms

Catatonia



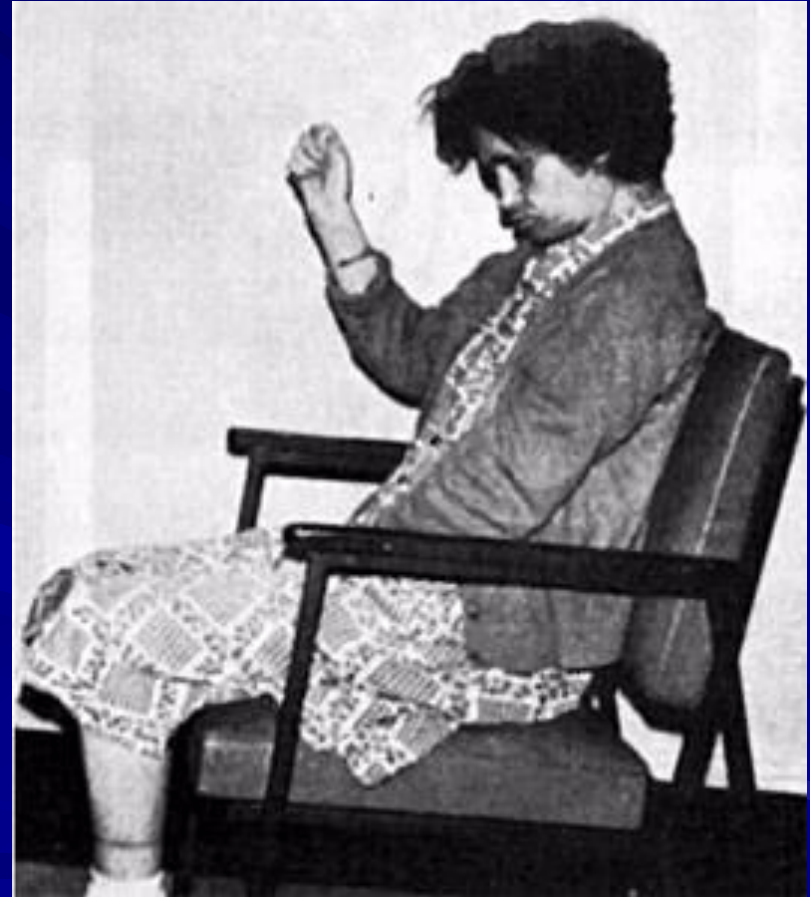
- A motor syndrome in psychiatric patients
- Found in:
 - Mania
 - Depression
 - Systemic diseases
 - Toxic syndromes
 - Schizophrenia
 - Neurologic disorders

“The patient remains entirely motionless, without speaking, and with a rigid, masklike facies, the eyes focused at a distance; he seems devoid of any will to move or react to any stimuli; there may be fully developed ‘waxen’ flexibility, as in cataleptic states. The general impression conveyed by such patients is one of profound mental anguish.”

Kahlbaum 1874

Catatonia

- Prevalence of catatonia among psychiatric patients ranges from 7.6% to 38%
- Most catatonic patients have a mood disorder
 - Particularly mania
- 20% of patients with mania exhibit catatonic features
- Syndrome has an excellent short-term prognosis



Catatonia

Primary Signs

- Mutism
- Immobility/ Stupor
- Staring
- Posturing
- Negativism
- Grimacing

Associated Signs

- Rigidity
- Mannerisms
- Stereotypy
- Echophenomena
- Waxy flexibility
- Perseveration

Treatment

- Benzodiazepines: Lorazepam
 - IV or PO
 - Give until relief of symptoms or sleep
- ECT is the definitive treatment
- Antipsychotics
 - May exacerbate syndrome
 - Even the atypical antipsychotics may induce neuroleptic malignant syndrome in catatonic patients

Adverse Effects

- ECT is the safest procedure performed under general anesthesia
 - Mortality rate $\leq 0.002\%$
- Medical morbidity results from the anesthetic administration or the physiological consequences of the induced seizure
 - Transient blood pressure and heart rate changes
 - Arrhythmias
- Common, non-serious side effects include headache, nausea, and muscle aches

Adverse Effects

- The cognitive effects of ECT remain an issue of concern and controversy in the field
 - For the vast majority of patients, these effects are mild and acceptable
 - For a small minority they may be considerably more extensive
- The extent of cognitive impairment (*primarily retrograde amnesia*) is proportional to the intensity of the ECT administered