

# **Neurocognitive Disorders of the DSM-5**

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# Speakers

- **Allyson Rosen**
- **Ruth O'Hara**
- **Maya Yutsis**
- **Brian Yochim**
- **Geoff Kerchner**

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DIAGNOSTIC AND STATISTICAL  
MANUAL OF  
MENTAL DISORDERS

FIFTH EDITION

DSM-5

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AMERICAN PSYCHIATRIC ASSOCIATION



# Neurocognitive Disorders

- **Delirium**
- **Major and Mild Neurocognitive Disorder (NCD)**

# Neurocognitive Disorders (NCD)

- Primarily COGNITIVE disorders
- Acquired and represent decline  
(i.e. not developmental)

# Neurocognitive Disorders

- Primarily COGNITIVE disorders
- Acquired and represent decline  
(i.e. not developmental)
- Underlying brain pathology
  - For degenerative disorders monitor consensus guidelines in addition to DSM 5

# Updates on Neurocognitive Disorders????

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**NO**

**We can still be  
Updates on Dementia**



# **Neurocognitive Disorders (NCD)**

**vs.**

## **Dementia**

- **Dementia typically refers to degenerative d/o in elderly**

# **Neurocognitive Disorders (NCD)**

**vs.**

## **Dementia**

- **Dementia typically refers to degenerative d/o in elderly**
- **DSM expands category to d/o of younger**
  - **E.g. HIV, traumatic brain injury**

**Major and Mild  
Neurocognitive Disorders  
(NCD)**

# Major NCD

- **Significant Cognitive Decline**
- **Interfere with independence**
- **Not due to delirium**
- **Not due to other mental disorder**

# Major NCD vs. Dementia

- **Can be single domain**
  - E.g. Amnestic
  - Exception: Major NCD due to Alzheimer's disease.

# Major NCD

- **Significant Cognitive Decline**
- **Interfere with independence**
- **Not due to delirium**
- **Not due to other mental disorder**

# Mild NCD

- Moderate Cognitive Decline
- NOT Interfere with independence
- Not due to delirium
- Not due to other mental disorder

# Mild NCD

- Like mild cognitive impairment
- Previously:  
    **Cognitive Disorder**  
    **Not Otherwise Specified**



# **Major and Mild Neurocognitive Disorders**

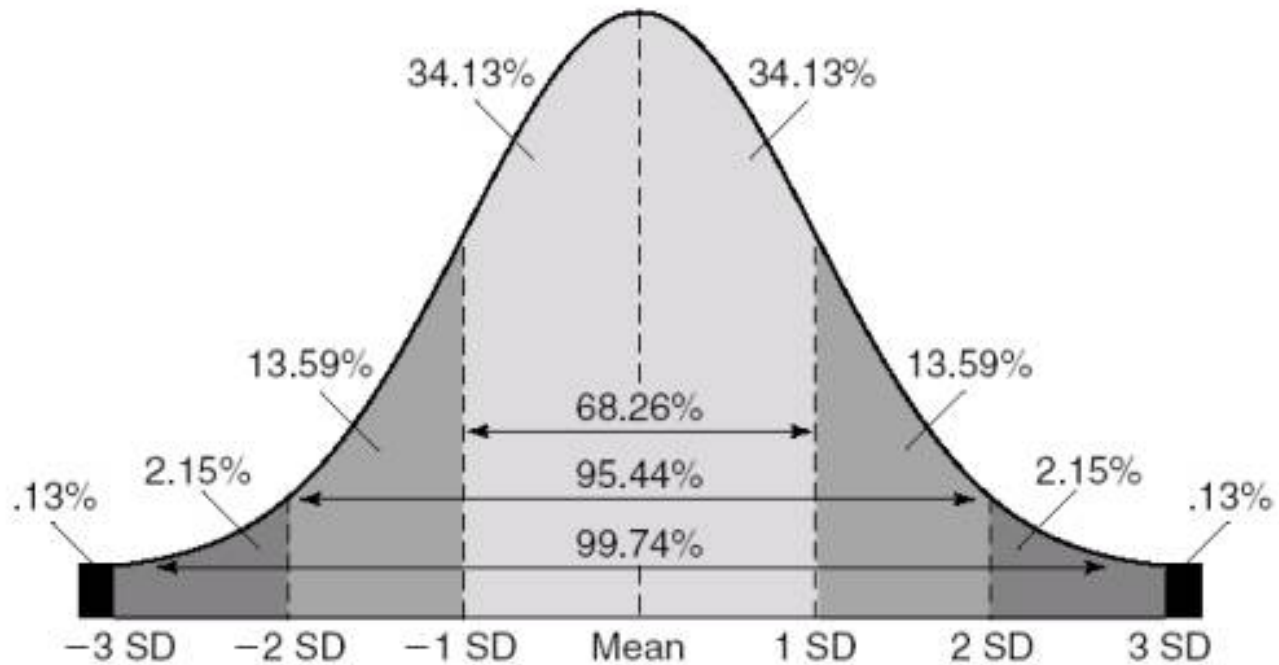
- **Cognition: Psychometric Definition**

# Mild vs Major NCD

## Cognitive Testing

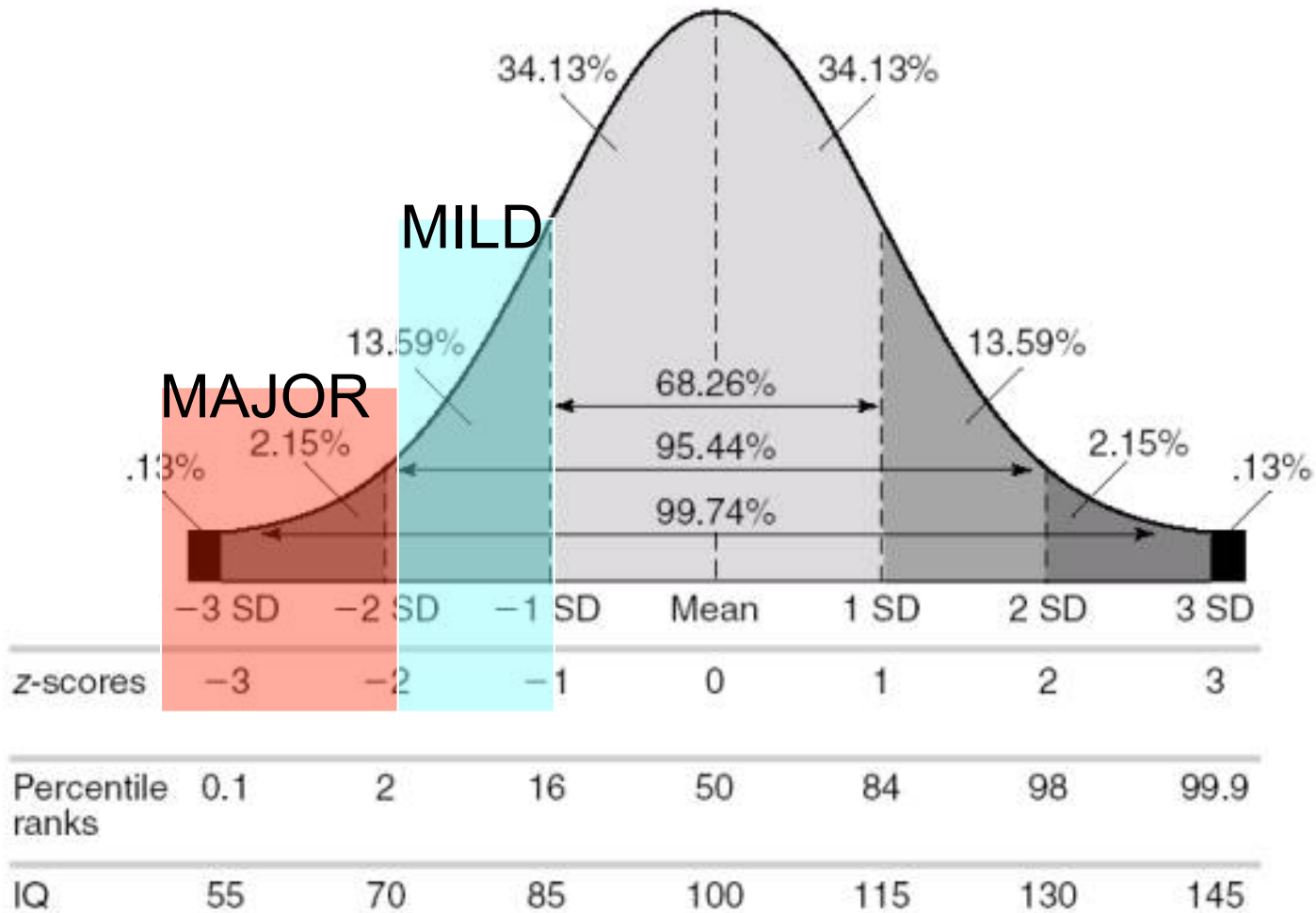
- **Mild:** 1–2 standard deviation (SD) range (between the 3rd and 16th percentiles)
- **Major:** Below 2 SD or 3<sup>rd</sup> percentile

# Test Scores



	-3 SD	-2 SD	-1 SD	Mean	1 SD	2 SD	3 SD
z-scores	-3	-2	-1	0	1	2	3
Percentile ranks	0.1	2	16	50	84	98	99.9
IQ	55	70	85	100	115	130	145

# Test Scores



# Mild vs Major NCD

## Cognitive Testing

- **Mild:** 1–2 standard deviation (SD) range (between the 3rd and 16th percentiles)
- **Major:** Below 2 SD or 3<sup>rd</sup> percentile
- These should not be rigidly used! Consider premorbid level, sensitivity of tests etc.
- Major and Mild exist on a continuum

# Cognitive domains specified

## DSM-5:

- **Complex attention**
- **Executive function**
- **Learning & memory**
- **Language**
- **Perceptual-motor**
- **Social cognition**

## DSM-IV:

- **Memory impairment**
- **Aphasia**
- **Apraxia**
- **Agnosia**
- **Executive dysfunction**

# Other Descriptors

- **Possible vs Probable**
- **Behavioral Disturbance:**
  - **With:** e.g. psychosis, mood, agitation
  - **Without** (not clinically significant)
- **Severity (level of disability)**
  - **Mild:** Instrumental ADL's are preserved
  - **Moderate:** **Basic** ADL's affected
  - **Severe:** Fully dependent

# Types of Neurocognitive Disorders

- **Delirium**
- **Major and Mild Neurocognitive Disorder (NCD)**



# **Major and Mild Neurocognitive Disorder (NCD)**

**NCD due to:**

**Alzheimer's disease**

**Vascular disease**

**Traumatic Brain Injury**

**Lewy body disease**

**(several others)**

**Other NCDs**

# **Neurocognitive Disorders of the DSM-5**

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## **Delirium Traumatic Brain Injury**

**Maya Yutsis, PhD**  
Clinical Neuropsychologist  
Polytrauma Transitional Rehabilitation Program  
VA Palo Alto Health Care System

# Delirium

# Differential Diagnosis of Delirium

- **Major Neurocognitive Disorder**
- **Delirium due to a General Medical Condition**
- **Substance Intoxication Delirium**
- **Substance Withdrawal Delirium**
- **Delirium due to Multiple Etiologies**
- **Delirium NOS**

# Delirium Differs from other NCD

- Rapid Onset in hours to days
- Linked to Medical Condition, Substance Intoxication/Withdrawal, Medications, other causes
- May resolve completely
- Symptom length:
  - **Acute**- hours to days
  - **Persistent**-weeks to months

# Delirium Diagnostic Criteria

- **Key Features: Rapid and Abrupt onset of:**
  - Impaired Attention
  - Lack of Awareness of environment
- **Change in at least ONE Cognitive Domain:**
  - Recent Memory
  - Orientation
  - Language (i.e. rambled speech, mumbling, difficult to understand)
  - Perceptual Disturbance
- **Associated Features**
  - Change in sleep-wake cycle
  - Change in emotional states
  - Worsening of behavioral problems in the evening

**NCD due to  
Traumatic Brain Injury**



# Mild NCD due to TBI

- **Mild NCD**
  - Cognition: **3-16 %ile**
  - Functional Independence: **Mild decline but not impaired\***
- **Onset: Medically documented history of TBI**  
(at least 1 of the criteria):
  - Loss of consciousness
  - Post-traumatic amnesia
  - Confused and disoriented immediately after the event
  - Neurological/Neuroimaging evidence, **not required**
- **Symptom Course**
  - Immediate onset following TBI or after recovering consciousness
  - Persist past acute post-injury period
  - Any cognitive domain involvement
  - Recovery Trajectory: partial or complete
  - Weeks to months

\*may need assistance but not fully dependent on others

# Major NCD due to TBI

- **Major NCD**
  - Cognition: **<3%ile**
  - Functional Independence: **Impaired**
- **Onset: Medically documented history of TBI**  
(at least 1 of the criteria):
  - Loss of consciousness
  - Post-traumatic amnesia
  - Confused and disoriented immediately after the event
  - Neurological/Neuroimaging evidence, **IS required**
- **Symptom Course**
  - Immediate onset following TBI or after recovering consciousness
  - Persist past acute post-injury period
  - Any cognitive domain involvement
  - Recovery Trajectory: partial or complete
  - Weeks to months

# **Neurocognitive Disorders of the DSM-5**

## **NCD Associated with Lewy Body Disease**

**Allyson Rosen, PhD, ABPP-Cn**

# **NCD due to LBD**

- **NCD**
- **Onset: Insidious**
- **Core symptoms**
  - **Fluctuating cognition/attention/alertness**
  - **Visual hallucinations-well formed and detailed**
  - **Parkinsonian movement develops 1 year AFTER cognitive impairment**
- **Suggestive features**
  - **Rapid eye movement (REM) sleep disorder**
  - **Neuroleptic sensitivity**

# Key Issues in NCD due to LBD

- **Neuroleptic Sensitivity**
  - Worsening of movement disorder and impaired consciousness
- **Onset:**
  - Major NCD BEFORE motor (vs. Parkinson's)
- **Probable/Possible**
  - Differ in number of core and suggestive features
- **Fluctuations: Existing measures**
  - e.g. Ferman et al., 2004; Walker et al., 2000

# Beyond DSM 5

- **McKeith, I. G., Dickson, D. W., Lowe, J., Emre, M., O'Brien, J. T., Feldman, H. et al. (2005). Diagnosis and management of dementia with Lewy bodies: third report of the DLB Consortium. *Neurology*, 65(12), 1863-1872.**

# **Neurocognitive Disorders of the DSM-5: Alzheimer's Disease**

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# **Major or Mild NCD due to Alzheimer's disease (AD)**

- **Insidious onset & gradual progression**
- **Major NCD: 2 or more cognitive domains impaired (unlike other Major NCDs) + impaired IADLs**
- **Mild NCD: 1 or more cognitive domains impaired, IADLs intact**



# **“Probable” vs. “Possible”: AD genetic mutation**

- **“Probable” vs. “Possible” are differentiated in part by presence of Alzheimer’s disease gene.**
- **This can be from family history or formal genetic testing.**

# Major NCD due to AD

- ***Probable AD***: either one must be present:
- **Evidence of AD genetic mutation, or**
- **All 3 of the following:**
  - Impairment in memory + 1 other domain
  - Progressive, gradual decline
  - No other possible etiology
- **Otherwise, *Possible AD* is diagnosed**

# Mild NCD due to AD

- **Probable AD: requires evidence of Alzheimer's gene.**
- **Possible AD: no evidence of AD gene, but all 3 of these factors exist:**
  - Decline in memory & learning
  - Progressive, gradual decline
  - No evidence of other etiologies.

# Beyond DSM 5: MCI Reference

