



# CLINICAL REASONING STRATEGY

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- How do clinicians think?
- How do clinicians learn to think?
- Can we teach clinicians how to think?

# HOW DO CLINICIANS THINK?

Novice vs Expert Clinicians?

# HOW DO CLINICIANS THINK?

Hypothesis Testing

VS

Pattern Recognition

# HOW DO CLINICIAN THINK?

Clinician

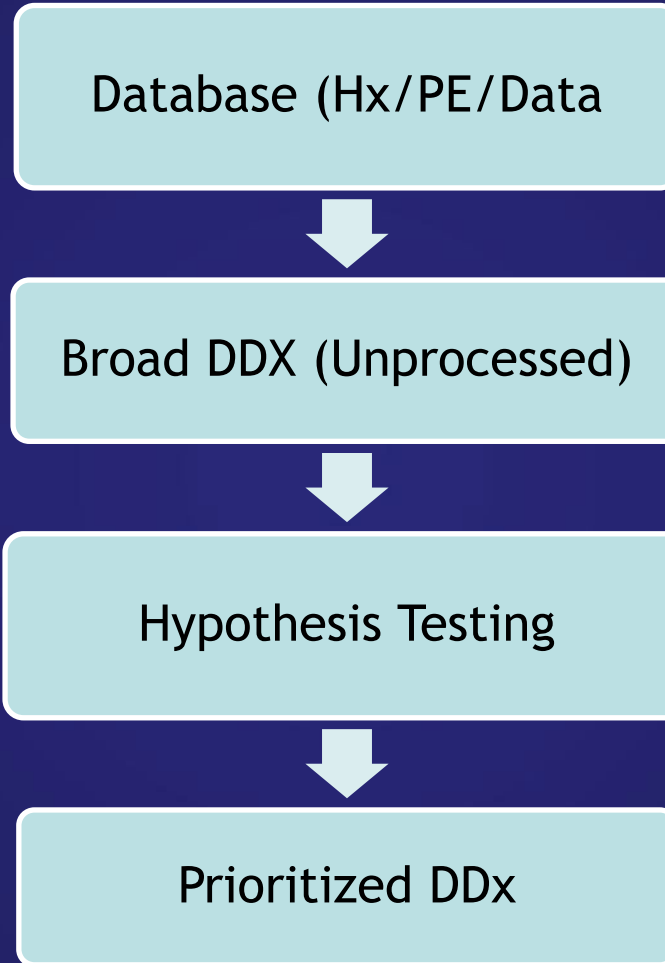
VS

Fighter Pilot



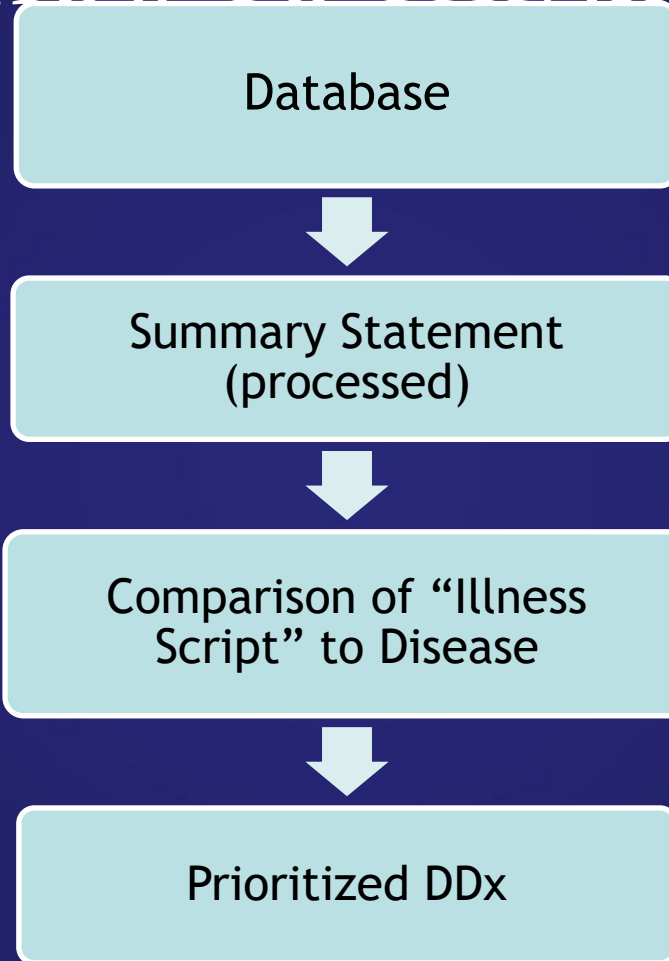


# CAN WE TEACH CLINICIANS HOW TO THINK?





# HOW TO THINK?



# PROCESSING KEY FEATURES

- Eliminate non-specific/redundant symptoms
- Identify most important symptoms
- Group those symptoms/signs that explain the most important symptom (identify patterns)
- Descriptively process all items on the list

# SUMMARY STATEMENT (ILLNESS SCRIPT)

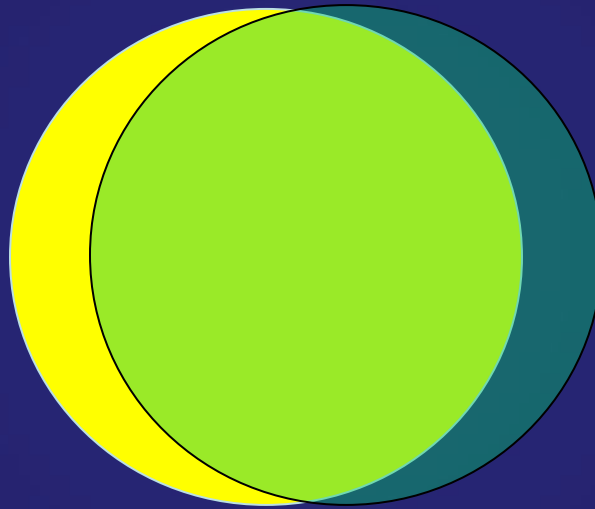
- Key features of the database (processed)
- Time course
- Epidemiology

# COMPARE AND CONTRAST

- Generate potential diagnoses to consider
- Define the key or classic features of proposed disease
- Compare and contrast these features with the features and patterns in current patient
- Prioritize the DDx based on the comparison process

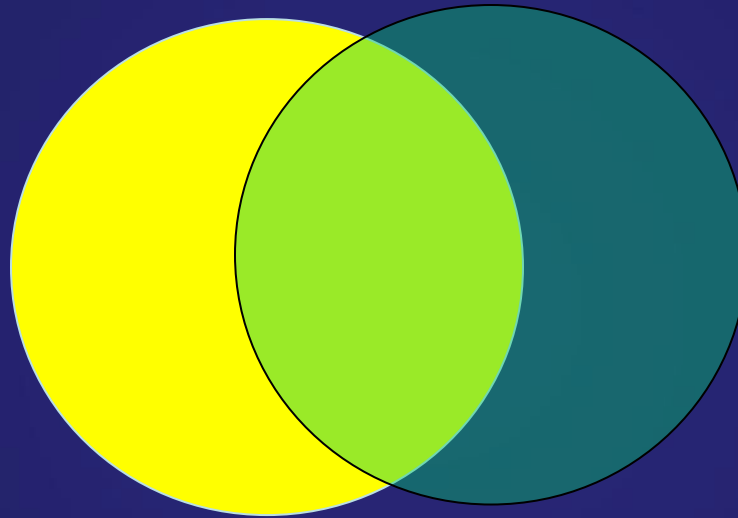
# PRIORITIZED DDx

Type 1 Diagnosis



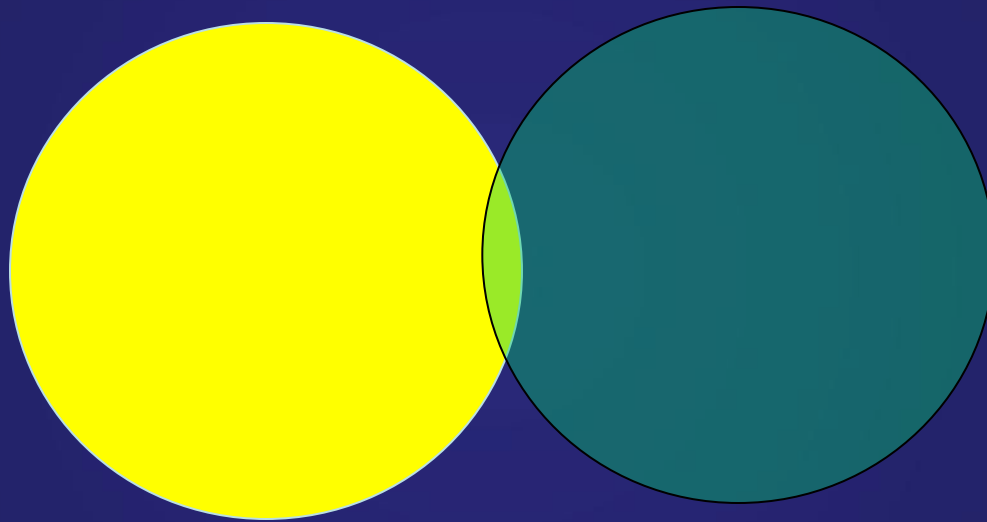
# PRIORITIZED DDx

Type 2 Diagnosis



# PRIORITIZED DDX

Type 3 Diagnosis



# PRIORITIZED DDX

Type 1b Diagnosis

?



# PRIORITIZED DDx

Type 1  
1b

Type 2

Type 3

# CC: HEADACHE AND CONFUSION

32 yo woman with AIDS, (CD4=22) presents with four weeks of worsening headache and fever. The headache is over her entire head, throbbing and unremitting and is associated with photophobia and stiff neck. Over the past two days she has stopped eating. She also complains of blurry vision and general aches and pains.

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# CC: HEADACHE AND CONFUSION

- PMH:
  - AIDS on no meds (ran out)
  - PJPx2
- SH:
  - Prior IVDA (none for past year)
  - No tobacco
  - No ETOH
- MEDS: none
- NKDA

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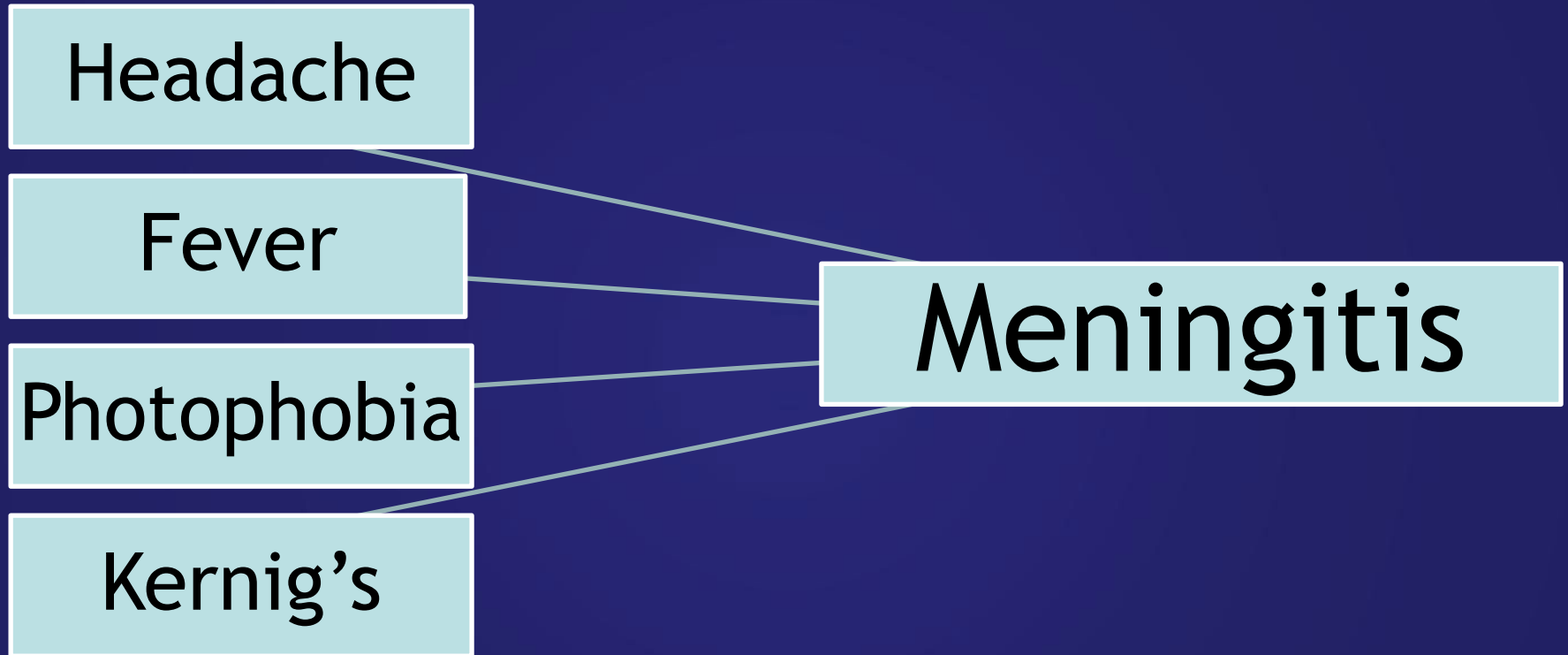
# PHYSICAL EXAM

- VS: T=103.5 BP: 139/72 P=100 RR:=20  
(+orthostasis)
- GEN: Lethargic in NAD
- HEENT: dry membranes, + photophobia, +  
papilledema, + meningismus
- NEURO: oriented x1, no motor deficits, unable  
to test sensory or cerebellar fxn

# PHYSICAL EXAM

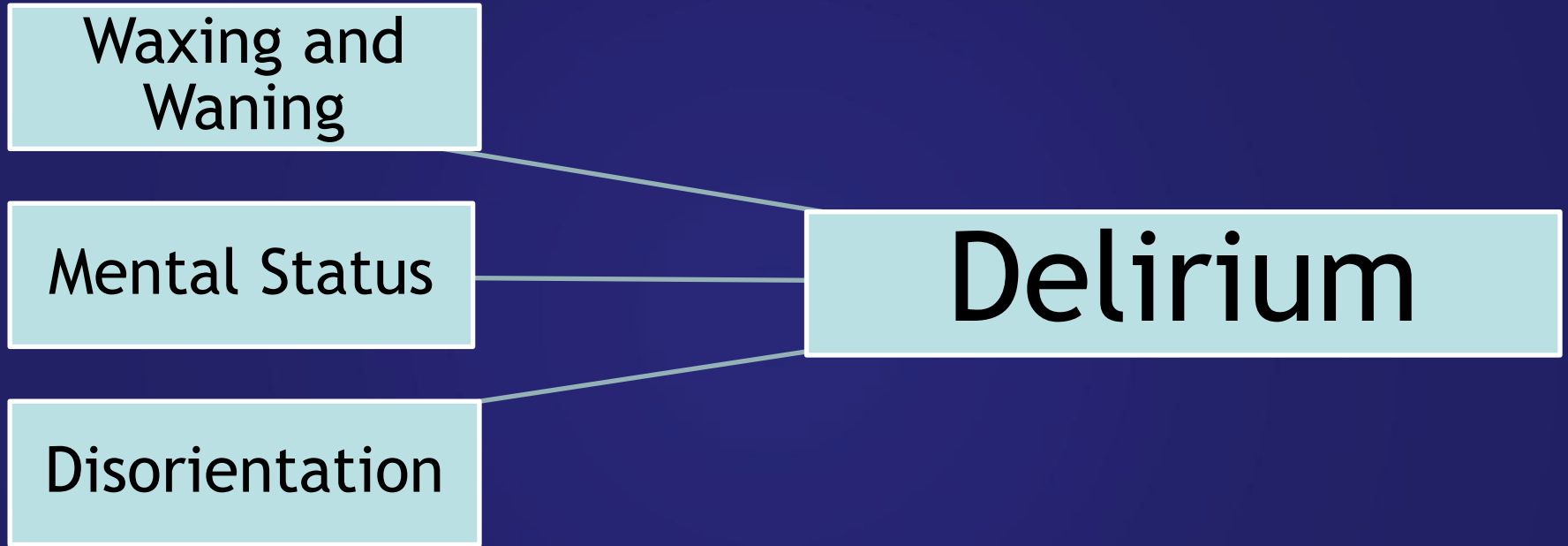
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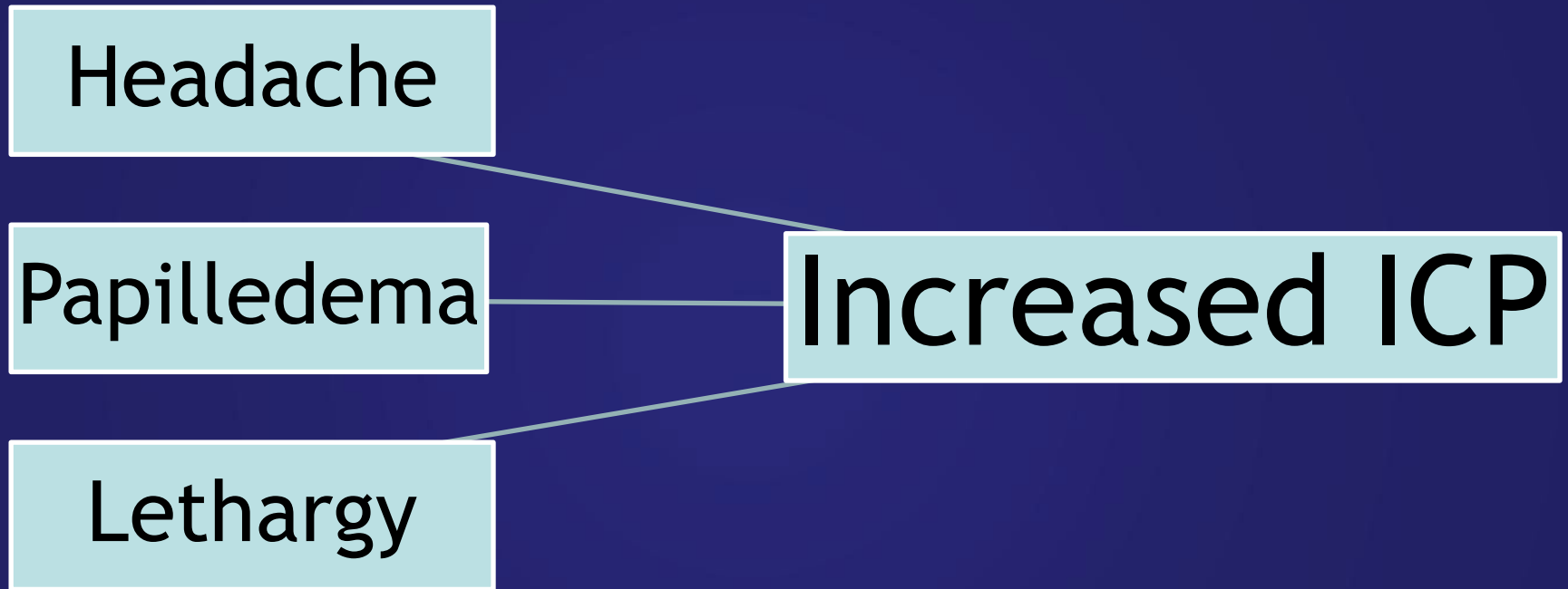




# PROCESSED KEY FEATURES



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# PROCESSED KEY FEATURES

Poor po Intake

Orthostasis

Dry Oral

Membranes

Volume Depletion

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graph LR; A[Poor po Intake] --- D[Volume Depletion]; B[Orthostasis] --- D; C[Dry Oral] --- D; E[Membranes] --- D;
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# SUMMARY STATEMENT

Epidemiology: 35 yo woman with AIDS

Time Course: Sub-acute

Key Features:

Meningitis

Delirium

Increased ICP

Volume Depletion

# PRIORITIZED DDx

Type 1  
1b

Type 2

Type 3

# PRIORITIZED DDX

Type 1: Cryptococcal Meningitis  
TB Meningitis

Type 1b: Bacterial Meningitis

Type 2: Toxoplasmosis  
CNS Lymphoma

Type 3: Sarcoidosis  
Pseudotumor Cerebri