

Urine Toxicology Interpretation

Alyssa F. Peterkin, MD

Assistant Professor of Medicine
Addiction Medicine Fellowship
Director

May 5, 2026



59-year-old woman with chronic pain managed with **oxycodone** presents to connect to a methadone clinic. She reports using **heroin and cocaine** daily. A urine drug test is ordered.

Her urine drug test is negative for oxycodone, opiates, fentanyl and cocaine.

How would you interpret this result?

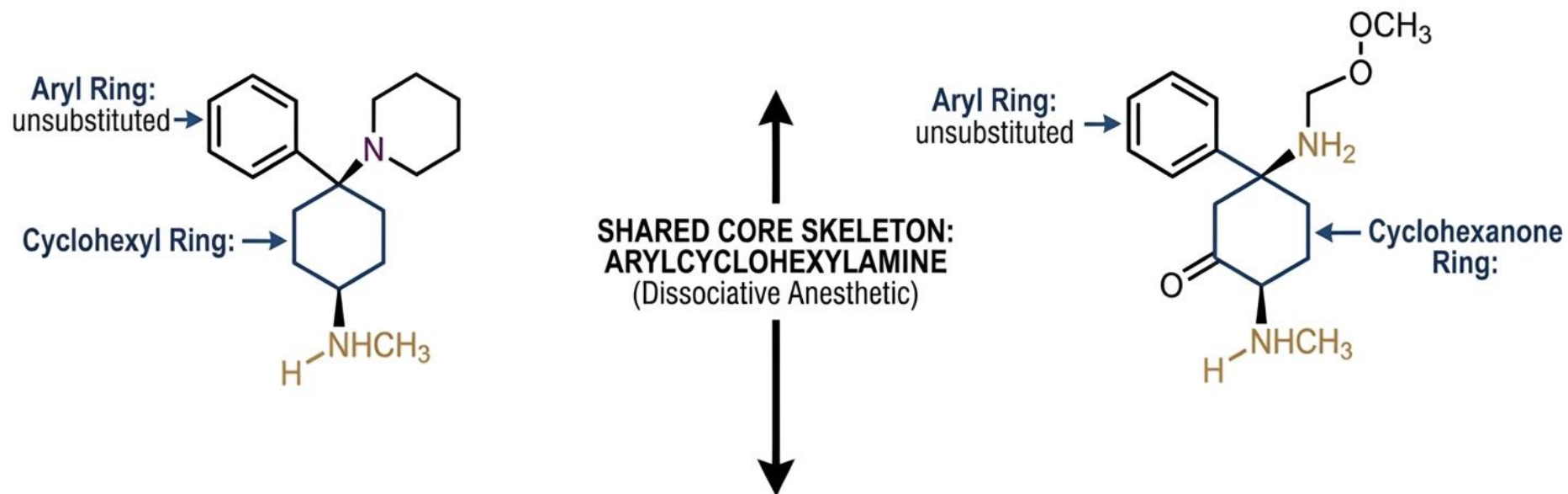
How would you manage this patient's unexpected urine drug test result?



Drug Test Types: Qualitative

- Immunoassays
- Identifies drug classes

COMPARATIVE STRUCTURE: VENLAFAXINE vs. PCP





Drug Test Types: Quantitative

- Confirmatory
- Lab based
- Gas or Liquid Chromatography
- Mass Spectrometry
- Days to result
- Results as numerical values



Interpreting Test Results

- False Negative
- False Positive
- Adulterants
- Substitution

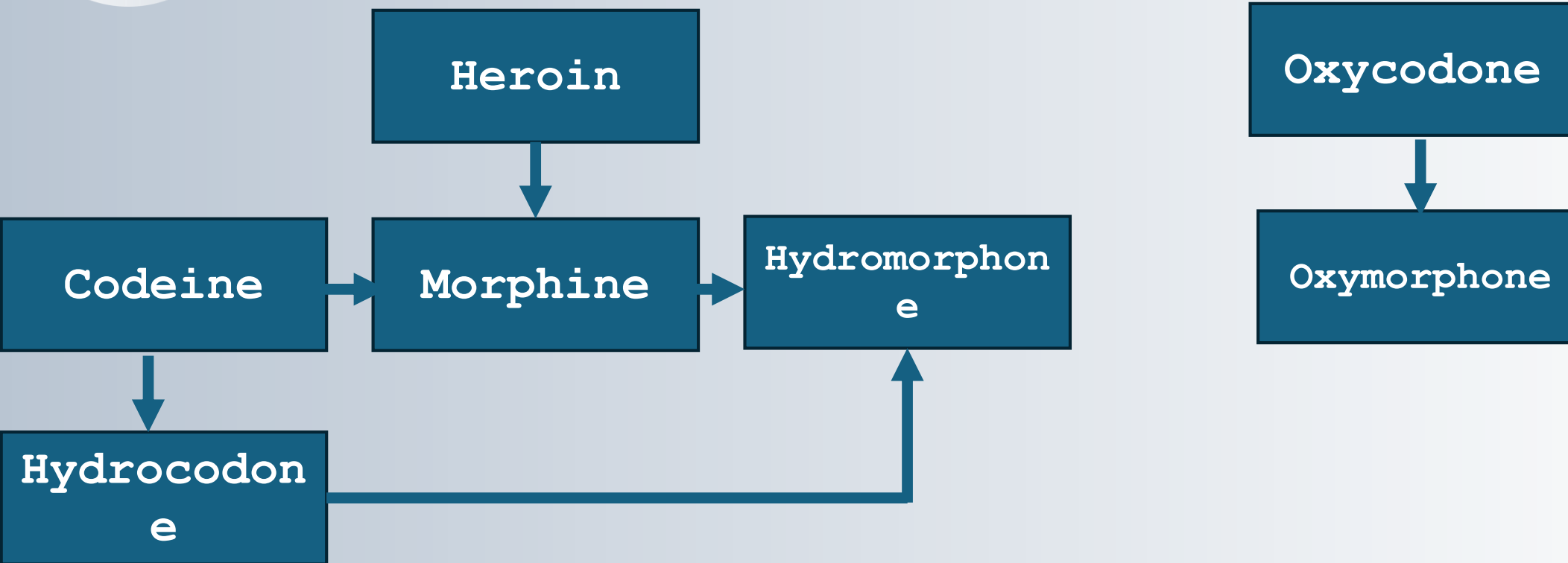




Interpreting Test Results: Window of Detection

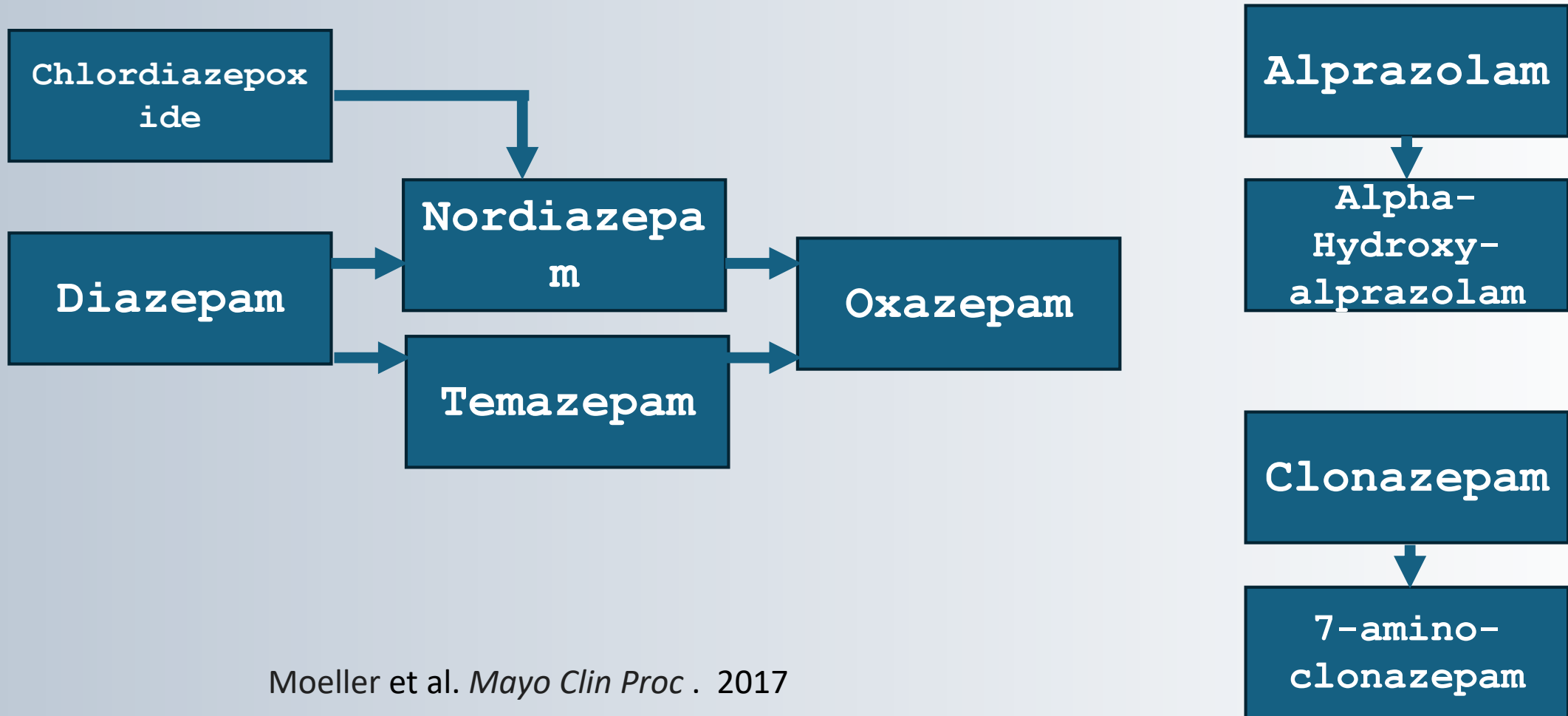
- Influenced by:
 - Amount consumed
 - Cut off concentration
 - Frequency of Use
 - Last Time of Use
 - Rate of Metabolism
 - Drug Lipophilicity

Interpreting Test Results: Metabolites





Interpreting Test Results: Metabolites





Takeaways

- Urine Toxicology Interpretation is challenging!
- Know what is included in your testing panel.
- Discuss urine drug testing openly with patient.
- Discuss unexpected findings with open-ended questions.