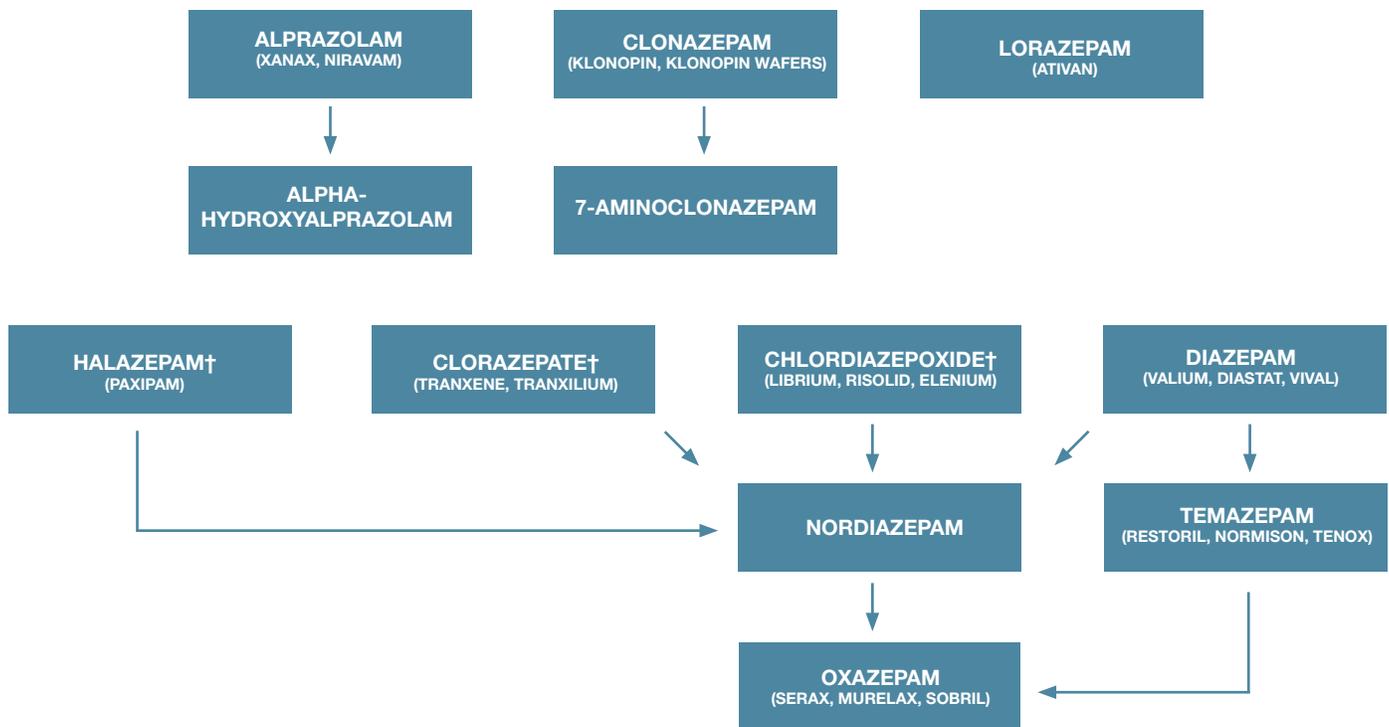


## BENZODIAZEPINES

Benzodiazepines are a class of drugs that act on the central nervous system (CNS) to reduce activity by targeting the GABA receptor.<sup>1,2</sup> Benzodiazepines are the most commonly prescribed class of drugs in the world for the treatment of insomnia and anxiety; they are also used as anticonvulsants.<sup>3,4</sup> When used as prescribed, benzodiazepines are relatively safe, but have abuse potential and enhance CNS and respiratory depression when used concomitantly with opioids analgesics.<sup>5</sup>

Benzodiazepines are comprised of similar benzene and diazepine ring structures, making detection with immunoassay less sensitive and specific for identifying the individual drugs within the drug class. Precision Diagnostics offers our LCMS/MS NextGen cutoffs for the individual parent drugs and metabolites listed in the chart below.

Although similar in structure, benzodiazepines exhibit different pharmacokinetic characteristics that ultimately affect the detection time in urine and overall detection in oral fluid.<sup>4</sup> The lipophilic nature of benzodiazepines allows for extended detection windows in urine.<sup>6</sup> Detection in oral fluid is typically less successful, due in large part to the tendency for protein binding of benzodiazepines in the blood and the glucuronidation of the associated metabolites, resulting in low concentrations in the oral fluid.<sup>4</sup>



†Parent drug not included in test menu

**A Precision Diagnostics trained Clinical Support Specialist can  
assist with further review of your patient's results**

**(800) 635-6901 Option 2**

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Precision Diagnostics, a leader in clinical laboratory testing and medication adherence monitoring, is transforming healthcare through the delivery of comprehensive, insightful clinical data that can help improve patient outcomes and manage costs. Specializing in providing quantitative drug testing, Precision Diagnostics' innovative state-of-the art technology provides insurers, pharmacies, medical practitioners, and patients with new levels of visibility and transparency that allows doctors to better assess patients' medication adherence, ensure patient compliance, and improve outcomes.

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