



Technical Memorandum

To: Physicians, Clinical Staff, and Clients
From: Dr. Wesley Kim, M.D., Medical Director
Date: October 19, 2018
Subject: Macroprolactin and Monomeric Prolactin

The most common form of prolactin in serum is 23 kD in size. Macroprolactin, or “Big Prolactin” is a term used to describe aggregates of prolactin and antibodies, most often IgG, that range in size from approximately 150 to 170 kD.

These complexes are immunologically detectable in many lab assays for prolactin, but are not biologically active and appear to cause no clinical abnormality. Because of the size of the complexes however, there is decreased normal clearance resulting in falsely elevated levels of prolactin which can result in the misdiagnosis and mistreatment of patients for presumed hyperprolactinemia.

One way to resolve this is by treatment of the sample with polyethylene glycol (PEG) which will precipitate out the macroprolactin fraction and then reassaying the sample for prolactin which now should only detect the physiologically active monomeric form.

Beginning November 5, 2018, DLS will be adjusting its test menu for Prolactin. We will still offer **Prolactin Total**, but in addition we will offer **Prolactin with reflex to monomeric prolactin**. In this case, if the total prolactin result is elevated, DLS will treat the sample with PEG and then rerun the prolactin assay. The total Prolactin result, along with the Monomeric Prolactin result, and their respective ranges will both be reported for the reflex test.

Test Information:

Test	Order Code	Reference Range	Units	Reflex Criteria	CPT
Prolactin	314	M: 4.1-15.2 F: 4.8-23.3	ng/mL	N/A	84146
Prolactin w/Reflex Monomeric Prolactin	314R	M: 4.1-15.2 F: 4.8-23.3	ng/mL	M: >15.2 F: >23.3	84146 x2 if Monomeric Prolactin performed
<i>Monomeric Prolactin</i>	<i>N/A</i>	<i>M: 3.0-11.6 F: 3.5-18.0</i>	<i>ng/mL</i>		

If you have any questions or concerns, please call DLS Client Services at 589-5101.