



Ascend Clinical offers a variety of adequacy panels in LabCheck.

#### HEMODIALYSIS

<b>Kt/V Jindal (Not K/DOQI Recommended)</b>	<ul style="list-style-type: none"><li>• Jindal calculation</li><li>• Does not require draw information</li><li>• Includes Pre BUN, Post BUN, URR and Kt/V Jindal</li></ul>
<b>Kt/V Natural Log, URR</b>	<ul style="list-style-type: none"><li>• Daugirdas II calculation</li><li>• Requires draw information: pre-weight, post-weight, treatment time</li><li>• Includes Pre BUN, Post BUN, URR, UFR and Kt/V Natural Log</li><li>• CMS requirement for patients dialyzing 3 times per week</li></ul>
<b>Kt/V Natural Log, URR, nPNA (3x/wk)</b>	<ul style="list-style-type: none"><li>• Daugirdas II and Depner calculations</li><li>• Requires draw information: pre-weight, post-weight, treatment time, treatment number for nPNA calculation</li><li>• Includes Pre BUN, Post BUN, URR, UFR, Kt/V Natural Log and nPNA</li><li>• nPNA calculated from Kt/V <u>without</u> formal kinetic modeling by Depner and Daugirdas using thrice weekly dialysis</li></ul>
<b>Kt/V Standard, Natural Log, URR</b>	<ul style="list-style-type: none"><li>• Leypoldt and Daugirdas II calculations</li><li>• Requires draw information: pre-weight, post-weight, treatment time, number of treatments per week</li><li>• Includes Pre BUN, Post BUN, URR, UFR, Kt/V Standard and Kt/V Natural Log</li></ul>
<b>Kt/V Standard, URR (<math>\geq 3</math>x/wk)</b>	<ul style="list-style-type: none"><li>• Leypoldt calculation</li><li>• Requires draw information: pre-weight, post-weight, treatment time, number of treatments per week</li><li>• Includes Pre BUN, Post BUN, URR, UFR and Kt/V Standard</li><li>• CMS requirement for patients dialyzing 2 or 4-6 times per week</li></ul>
<b>Kt/V Residual</b>	<ul style="list-style-type: none"><li>• Kt/V Residual calculated when Residual Urea Clearance ordered together with Kt/V Natural Log or Kt/V Standard; assesses total adequacy and is included on a patient report up to six months.</li><li>• Requires draw information: 24-hr urine collection time, urine volume, dry weight, height</li><li>• Includes Pre BUN, KrU, Urine Urea Nitrogen, Kt/V Residual</li></ul>

#### PERITONEAL DIALYSIS

<b>PD Adequacy No Urine</b>	<ul style="list-style-type: none"><li>• Volume of Distribution (V): Hume and Weyers for Adult; Friis-Hansen for Peds &lt;16 years</li><li>• Body Surface Area (BSA): Dubois and Dubois for Adult; Haycock for Peds &lt;16 years</li><li>• Protein Nitrogen Appearance (PNA): Bergstrom</li><li>• Requires draw information: dry weight, height, 24-hr total drain volume</li><li>• Includes Blood BUN, Blood Creatinine, Fluid Glucose, Fluid Urea Nitrogen, Fluid Creatinine, Weekly Dialysate Kt/V, Weekly Dialysate CrCl, nPNA</li></ul>
<b>PD Adequacy With Urine</b>	<ul style="list-style-type: none"><li>• Volume of Distribution (V): Hume and Weyers for Adult; Friis-Hansen for Peds &lt;16 years</li><li>• Body Surface Area (BSA): Dubois and Dubois for Adult; Haycock for Peds &lt;16 years</li><li>• Protein Nitrogen Appearance (PNA): Bergstrom</li><li>• Requires draw information: dry weight, height, total urine collection time, urine volume, 24-hr total drain volume</li><li>• Includes Blood BUN, Blood Creatinine, Fluid Glucose, Fluid Urea Nitrogen, Fluid Creatinine, Urine Urea Nitrogen, Urine Creatinine, Weekly Dialysate Kt/V, Weekly Residual Kt/V, Weekly Total Kt/V, Weekly Dialysate CrCl, Weekly Residual GFR, Weekly Total CrCl, Weekly Residual CrCl, and nPNA</li></ul>

#### FORMAL UREA KINETIC MODELING (UKM)

Formal Kinetic Modeling is also available in LabCheck for hemodialysis patients dialyzing 2-3 times per week. Per KDOQI, formal kinetic modeling provides a quantitative method for developing a treatment prescription for a specific patient. Formal UKM can be used to calculate the exact treatment time required to deliver a particular hemodialysis dose at specified blood and dialysate flows with a particular dialyzer.

#### RESOURCES

**AJKD:** [https://www.ajkd.org/article/S0272-6386\(15\)01019-7/fulltext](https://www.ajkd.org/article/S0272-6386(15)01019-7/fulltext)

**CMS:** <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Dialysis.html>

**KDOQI:** [https://www.kidney.org/sites/default/files/docs/12-50-0210\\_jag\\_dcp\\_guidelines-hd\\_oct06\\_sectiona\\_ofc.pdf](https://www.kidney.org/sites/default/files/docs/12-50-0210_jag_dcp_guidelines-hd_oct06_sectiona_ofc.pdf)