**Removing Race and Body Surface Area Indexation for Estimated Kidney Function Based Drug Dosing: Aminoglycosides as Justification of These Principles**

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SUPPLEMENTARY MATERIALS

Table S1. Gentamicin volume of distribution random effects (eta_V) versus covariates that test whether covariates should be added to the model using *Pearson's correlation test and/or ANOVA*

| | COEFF | STATISTICS | P-VALUE |
|---|---|---|---|
| race | | 1.15 | 3.32e-1 |
| sex | | 7.16 | **7.67e-3** |
| logtadjbw | 0.23 | 5.78 | **1.19e-8** |
| logtage | 0.16 | 4 | **7.14e-5** |
| logtbsa | 0.23 | 5.81 | **9.99e-9** |
| logtcg_adjbw | -0.1 | -2.57 | **1.05e-2** |
| logtcg_dw | -0.11 | -2.62 | **9.04e-3** |
| logtcg_ibw | -0.13 | -3.13 | **1.8e-3** |
| logtcg_tbw | -0.066 | -1.62 | 1.07e-1 |
| logtckd_norace_bsa | -0.17 | -4.13 | **4.19e-5** |
| logtckd_norace_nobsa | -0.08 | -1.96 | **5.03e-2** |
| logtckd_race_bsa | -0.17 | -4.23 | **2.67e-5** |
| logtckd_race_nobsa | -0.089 | -2.19 | **2.86e-2** |
| logtdw | 0.22 | 5.47 | **6.55e-8** |
| logtheight | 0.17 | 4.16 | **3.73e-5** |
| logtibw | 0.17 | 4.1 | **4.73e-5** |
| logtweight | 0.22 | 5.41 | **9.33e-8** |
| scr | 0.15 | 3.75 | **1.92e-4** |

Logt, natural logarithm transformed to the central tendency weighted value; adjbw, Adjusted body weight; bsa, body surface area; cg_adjbw, Cockcroft-Gault with adjusted body weight, ; cg_dw, Cockcroft-Gault with dosing weight; cg_ibw, Cockcroft-Gault with ideal body weight; ; cg_tbw, Cockcroft-Gault with total body weight; ckd_norace_bsa, 2021 CKD-EPI equation indexed to bsa; ckd_norace_nobsa, 2021 CKD-EPI equation not indexed to bsa; ckd_race_bsa, 2009 CKD-EPI equation indexed to bsa; ckd_race_nobsa, 2009 CKD-EPI equation not indexed to bsa; dw, dosing weight; ibw, ideal body weight; scr, serum creatinine

Table S2. Gentamicin clearance random effects (eta_CL) versus covariates that test whether covariates should be added to the model using *Pearson's correlation test and/or ANOVA* for

| | COEFF | STATISTICS | P-VALUE |
|---|---|---|---|
| **race** | | 2.22 | 5.12e-1 |
| **sex** | | 0.15 | 6.95e-1 |
| **logtadjbw** | 0.12 | 3.06 | **2.3e-3** |
| **logtage** | -0.31 | -8 | **6.34e-15** |
| **logtbsa** | 0.13 | 3.15 | **1.7e-3** |
| **logtcg_adjbw** | 0.6 | 18.37 | **<2.2e-16** |
| **logtcg_dw** | 0.59 | 18.04 | **<2.2e-16** |
| **logtcg_ibw** | 0.57 | 16.88 | **<2.2e-16** |
| **logtcg_tbw** | 0.59 | 18.01 | **<2.2e-16** |
| **logtckd_norace_bsa** | 0.58 | 17.47 | **<2.2e-16** |
| **logtckd_norace_nobsa** | 0.62 | 19.54 | **<2.2e-16** |
| **logtckd_race_bsa** | 0.58 | 17.53 | **<2.2e-16** |
| **logtckd_race_nobsa** | 0.63 | 19.68 | **<2.2e-16** |
| **logtdw** | 0.11 | 2.82 | **4.9e-3** |
| **logtheight** | 0.091 | 2.24 | **2.54e-2** |
| **logtibw** | 0.075 | 1.85 | **6.54e-2** |
| **logtweight** | 0.12 | 2.95 | **3.34e-3** |
| **scr** | -0.45 | -12.38 | **<2.2e-16** |

Logt, natural logarithm transformed to the central tendency weighted value; adjbw, Adjusted body weight; bsa, body surface area; cg_adjbw, Cockcroft-Gault with adjusted body weight, ; cg_dw, Cockcroft-Gault with dosing weight; cg_ibw, Cockcroft-Gault with ideal body weight; ; cg_tbw, Cockcroft-Gault with total body weight; ckd_norace_bsa, 2021 CKD-EPI equation indexed to bsa; ckd_norace_nobsa, 2021 CKD-EPI equation not indexed to bsa; ckd_race_bsa, 2009 CKD-EPI equation indexed to bsa; ckd_race_nobsa, 2009 CKD-EPI equation not indexed to bsa; dw, dosing weight; ibw, ideal body weight; scr, serum creatinine

Table S3. Tobramycin volume of distribution random effects (eta_V) versus covariates that test whether covariates should be added to the model using *Pearson's correlation test and/or ANOVA*

| | COEFF | STATISTICS | P-VALUE |
|---|---|---|---|
| **race** | | 2.16 | 6e-1 |
| **sex** | | 36.92 | **1.43e-9** |
| **logtadjbw** | 0.27 | 13.49 | **<2.2e-16** |
| **logtage** | 0.15 | 7.6 | **4.17e-14** |
| **logtbsa** | 0.27 | 13.9 | **<2.2e-16** |
| **logtcg_adjbw** | −0.085 | −4.17 | **3.13e-5** |
| **logtcg_dw** | −0.081 | −3.96 | **7.66e-5** |
| **logtcg_ibw** | −0.12 | −5.75 | **9.97e-9** |
| **logtcg_tbw** | −0.046 | −2.24 | **2.52e-2** |
| **logtckd_norace** | −0.16 | −7.8 | **9.01e-15** |
| **logtckd_norace_nobsa** | −0.065 | −3.19 | **1.44e-3** |
| **logtckd_race** | −0.16 | −7.78 | **1.1e-14** |
| **logtckd_race_nobsa** | −0.084 | −4.1 | **4.26e-5** |
| **logtdw** | 0.27 | 13.88 | **<2.2e-16** |
| **logtheight** | 0.16 | 7.88 | **5.12e-15** |
| **logtibw** | 0.16 | 7.84 | **6.98e-15** |
| **logtweight** | 0.27 | 13.53 | **<2.2e-16** |

Logt, natural logarithm transformed to the central tendency weighted value; adjbw, Adjusted body weight; bsa, body surface area; cg_adjbw, Cockcroft-Gault with adjusted body weight, ; cg_dw, Cockcroft-Gault with dosing weight; cg_ibw, Cockcroft-Gault with ideal body weight; ; cg_tbw, Cockcroft-Gault with total body weight; ckd_norace_bsa, 2021 CKD-EPI equation indexed to bsa; ckd_norace_nobsa, 2021 CKD-EPI equation not indexed to bsa; ckd_race_bsa, 2009 CKD-EPI equation indexed to bsa; ckd_race_nobsa, 2009 CKD-EPI equation not indexed to bsa; dw, dosing weight; ibw, ideal body weight; scr, serum creatinine

Table S4. Tobramycin clearance random effects (eta_CL) versus covariates that test whether covariates should be added to the model using *Pearson's correlation test and/or ANOVA* for

| | COEFF | STATISTICS | P-VALUE |
|---|---|---|---|
| **race** | | 0.76 | 6e-1 |
| **sex** | | 35.41 | **3.07e-9** |
| **logtadjbw** | 0.093 | 4.55 | **5.53e-6** |
| **logtage** | -0.33 | -16.82 | **<2.2e-16** |
| **logtbsa** | 0.059 | 2.87 | **4.17e-3** |
| **logtcg_adjbw** | 0.54 | 31.61 | **<2.2e-16** |
| **logtcg_dw** | 0.54 | 31.63 | **<2.2e-16** |
| **logtcg_ibw** | 0.54 | 30.93 | **<2.2e-16** |
| **logtcg_tbw** | 0.53 | 30.53 | **<2.2e-16** |
| **logtckd_norace** | 0.5 | 28.34 | **<2.2e-16** |
| **logtckd_norace_nobsa** | 0.53 | 30.67 | **<2.2e-16** |
| **logtckd_race** | 0.51 | 28.53 | **<2.2e-16** |
| **logtckd_race_nobsa** | 0.53 | 30.3 | **<2.2e-16** |
| **logtdw** | 0.077 | 3.75 | **1.8e-4** |
| **logtheight** | 0.13 | 6.58 | **5.8e-11** |
| **logtibw** | 0.14 | 6.86 | **8.93e-12** |
| **logtweight** | 0.037 | 1.8 | **7.23e-2** |

Logt, natural logarithm transformed to the central tendency weighted value; adjbw, Adjusted body weight; bsa, body surface area; cg_adjbw, Cockcroft-Gault with adjusted body weight, ; cg_dw, Cockcroft-Gault with dosing weight; cg_ibw, Cockcroft-Gault with ideal body weight; ; cg_tbw, Cockcroft-Gault with total body weight; ckd_norace_bsa, 2021 CKD-EPI equation indexed to bsa; ckd_norace_nobsa, 2021 CKD-EPI equation not indexed to bsa; ckd_race_bsa, 2009 CKD-EPI equation indexed to bsa; ckd_race_nobsa, 2009 CKD-EPI equation not indexed to bsa; dw, dosing weight; ibw, ideal body weight; scr, serum creatinine