**Additional file 1. Spot equations to estimate 24-hour sodium excretion (mmol/day)**

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| **Kawasaki equation, 1993** |
| **M** | $$16.3 x \left\{\left[\frac{SNa }{SCr x 10}\right] x \left[\left(-12.63 x age\right) + \left(15.12 x wt\right) + \left(7.39 x ht\right) - 79.9\right]\right\}^{0.5}$$ |
| **F** | $$16.3 x \left\{\left[\frac{SNa }{SCr x 10}\right] x \left[\left(-4.72 x age\right) + \left(8.58 x wt\right) + \left(5.09 x ht\right) - 74.5\right]\right\}^{0.5}$$ |
| **Tanaka equation, 2002** |
|  | $$21.98 x \left\{\left[\frac{SNa }{SCr x 10}\right] x \left[\left(-2.04 x age\right) + \left(14.89 x wt\right) + \left(16.14 x ht\right) - 2244.45\right]\right\}^{0.392}$$ |
| **Mage equation, 2008** |
| **M** | $$\left[\frac{SNa}{SCr x 10}\right] x \left[0.00179 x \left(140 - age\right) x \left(wt^{1.5} x ht^{0.5}\right)\right] x \left[1 + 0.18 x A x \left(1.366 - 0.0159 x BMI\right)\right]$$where A = 1 if African American or Black race, and A = 0 if another race |
| **F** | $$\left[\frac{SNa}{SCr x 10}\right] x \left[0.00163 x \left(140 - age\right) x \left(wt^{1.5} x ht^{0.5}\right)\right] x \left[1 + 0.18 x A x \left(1.429 - 0.0198 x BMI\right)\right]$$where A = 1 if African American or Black race, and A = 0 if another race |
| **INTERSALT with potassium equation (North America), 2013** |
| **M** | $$\left\{25.46 + \left[0.46 x SNa\right] - \left[2.75 x SCr\right] - \left[0.13 x SK\right] + \left[4.10 x BMI\right] + \left[0.26 x age\right]\right\}$$ |
| **F** | $$\left\{5.07 + \left[0.34 x SNa\right] - \left[2.16 x SCr\right] - \left[0.09 x SK\right] + \left[2.39 x BMI\right] + \left[2.35 x age\right] - \left[0.03 x age^{2}\right]\right\}$$ |
| **INTERSALT without potassium equation (North America), 2013** |
| **M** | $$\left\{23.51 + \left[0.45 x SNa\right] - \left[3.09 x SCr\right] + \left[4.16 x BMI\right] + \left[0.22 x age\right]\right\}$$ |
| **F** | $$\left\{3.74 + \left[0.33 x SNa\right] - \left[2.44 x SCr\right] + \left[2.42 x BMI\right] + \left[2.34 x age\right] - \left[0.03 x age^{2}\right]\right\}$$ |
| **Toft equation, 2014** |
| **M** | $$33.56 x \left\{\left[\frac{SNa }{SCr x 10}\right] x \left[\left(-7.54 x age\right) + \left(14.15 x wt\right) + \left(3.48 x ht\right) + 423.15\right]\right\}^{0.345}$$ |
| **F** | $$52.65 x \left\{\left[\frac{SNa }{SCr x 10}\right] x \left[\left(-6.13 x age\right) + \left(9.97 x wt\right) + \left(2.45 x ht\right) + 342.73\right]\right\}^{0.196}$$ |

SNa = spot sodium; SCr = spot creatinine; SK = spot potassium; ht = height; wt = weight; BMI = body mass index; SNa in mmol/L; SK in mmol/L; SCr in mmol/L for the INTERSALT equations, in mg/dL for the other four equations; age in years; weights in kilograms; height in centimetres; BMI in kg/m2