1. **True or False**

   A. It is reasonable to assume that liver function is proportional to BSA.
   B. Weakly or moderately lipophilic drugs are poorly distributed in obese patients.
   C. Total body water (% of body weight) in neonates is usually smaller than in adults.
   D. Generally, the gastric emptying time of neonates is shorter than adults’.

2. The recommended regimen for a new drug X is 400 mg / m$^2$ (BSA) or 10 mg / kg (IBW) once a day. What is the dosage for a patient (male, 35 years-old, 165 cm, and 60 kg) based on BSA and IBW?

3. A female patient (42 years-old, 155 cm, and 58 kg) has a concentration of serum creatinine of 1.1 mg/dL. Please calculate her Cl$_{cr}$ based on the Cockcroft-Gault-Equation.
4. A 50-year-old male patient (60 kg, 160 cm, Cpcreat=1.2 mg/dL,) is treated with 100mg gentamicin i.v. short-term infusions (30 min) Q8h. Assuming linear pharmacokinetics (Vd=0.25L/kg, Cl=Ccreat), please predict the measured peak concentration 1 hour after the infusion was started and the measured trough concentration 30 min before the next infusion at steady state.

5. Determinate a regimen (dose and dosing interval) to treat a patient (CL=5 L/h, Vd=0.25 L/kg, 90 kg) that suffers from a pulmonary infection if the “true” peak and trough concentrations at steady state are supposed to be 25 mg/L and 5 mg/L, respectively. Assume a short-term infusion over 30 minutes.