

Carboplatin AUC Dosing Calculator

Patient name: _____ Date: _____

MRN: _____

Age: _____ years

Carboplatin Dose: _____ mg

Sex: M F

Height: _____ inches

Weight: _____ kg

Serum creatinine: _____ mg/ dL

Target AUC: _____

Note:

1. Doses are automatically rounded to the nearest 10 mg increment.
2. If the patient's weight changes by 10% or more, the carboplatin dose will need to be recalculated.
3. Capping the GFR (or Clcr) at 125 mL/min, using an adjusted body weight for overweight or obese patients and using a minimum serum creatinine of 0.7 mg/dL as recommended by NCCN to avoid overestimating Clcr and avoiding potential toxicity due to overdosing.
4. The dosing calculation method is the Calvert method.

Calculation steps for carboplatin dosage are available on page 2

Calculation process	Patient specific parameter
<p>If BMI < 25, use ACTUAL body weight (ABW) to determine creatinine clearance (Clcr)</p> <p>If BMI ≥ 25, use ADJUSTED body weight (AdjBW) to determine Clcr</p> $BMI (kg/m^2) = \frac{weight (kg)}{height (m)^2}$	kg/m ²
<p>Ideal Body Weight (IBW):</p> <p>≥ 60 inches (5 ft):</p> $IBW (kg)[males] = 50 + 2.3 (height (in) \text{ over } 60 \text{ inches})$ $IBW (kg)[females] = 45.5 + 2.3 (height (in) \text{ over } 60 \text{ inches})$ <p>< 60 inches (5 ft) using baseline method:</p> $IBW (kg)[males] = 50 - 0.833 (height (in) \text{ under } 60 \text{ inches})$ $IBW (kg)[females] = 45.5 - 0.758 (height (in) \text{ under } 60 \text{ inches})$	kg
<p>Adjusted Weight:</p> $AdjBW (kg) = IBW + 0.4(Actual BW - IBW)$	kg
<p>Clearance creatinine:</p> <p>If < 0.7 mg/dL, use 0.7 mg/dL to avoid overestimation of Clcr</p> $Clcr (mL/min)[males] = \frac{(140 - age) * weight (kg)}{72 * Scr (mg/dL)}$ $Clcr (mL/min)[females] = \frac{(140 - age) * weight (kg) * 0.85}{72 * Scr (mg/dL)}$	mL/min
<p>If the Clcr > 125 mL/min, maximum allowable Clcr is 125 mL/min</p>	mL/min
<p>Carboplatin dose (Calvert equation):</p> <p>Clcr is used to approximate GFR</p> $Carboplatin \text{ dose } (mg) = Target \text{ AUC} * (GFR + 25)$ <p>The maximum allowed doses of carboplatin are:</p> <p>AUC 6 = 900 mg</p> <p>AUC 5 = 750 mg</p> <p>AUC 4 = 600 mg</p>	mg

References:

1. NCCN Chemotherapy Order Templates Appendix B: Carboplatin Dosing
https://www.nccn.org/professionals/OrderTemplates/PDF/appendix_B.pdf
2. NIH Follow-Up for Information Letter Regarding AUC-Based Dosing of Carboplatin. October 22, 2010
https://ctep.cancer.gov/content/docs/Carboplatin_Information_Letter.pdf