

GUIDELINES AND RECOMMENDATIONS FOR DOSING CHEMOTHERAPEUTIC AGENTS WITH HEPATIC DYSFUNCTION

Chemotherapeutic Agent	ADJUSTMENT FOR HEPATIC DYSFUNCTION % OF STANDARD DOSE TO BE ADMINISTERED						
	T. Bili <1.5	SGOT < 60	T. Bili 1.5 – 3	SGOT 60 – 180	T.Bili 3.1 – 5	SGOT > 180	T. Bili > 5
Bleomycin ¹	No dosage adjustment required						
Cisplatin ¹	No dosage adjustment required						
Cyclophosphamide ²	100%		100%		100%		100%
Cytarabine ²	Any aminotransferase elevation – 50% dose reduction						
Dacarbazine	Any aminotransferase elevation – 50% dose reduction						
Daunorubicin ^{1,2}	100%		75%		50%		Omit
Docetaxel ³	Should generally not be given to patients with hepatic impairment (bilirubin > ULN or SGOT and or SGPT > 1.5 times the ULN AND alkaline phosphatase > 2.5 times ULN)						
Doxorubicin ¹	100%		50%		25%		Omit
Epirubicin	No information		50%		25%		No info
Estramustine ⁴	Administer with caution on patients with liver dysfunction						
Etoposide ¹	100%		50%		Omit		Omit
Fludarabine							
Fluorouracil ¹	100%		100%		100%		Omit
Idarubicin ⁴			2.5 – 5 mg/dL 50%				Omit
Irinotecan ⁵	Study evaluating the effect of 350 mg/m ² irinotecan in patients with hyperbilirubinemia indicates that patients with a bilirubin of < 1.5 x ULN and that patients with bilirubin's 1.51 – 3 x ULN should receive 200mg/m ²						
Liposomal Doxorubicin ⁴			1.2 – 3mg/dL 50%		25%		Omit
Methotrexate ¹	100%		100%		75%		Omit
Mitoxantrone ⁴	100%		50%		25%		Not Recommended
Oxaliplatin							
Procarbazine ²	If bilirubin (total) > 5 mg/dL or the AST/ALT is > 180 – Omit						
Vinorelbine	<2.0 mg/dL– 100%		2.1–3.0 mg/dL 50%		>3.0 mg/dL 25%		
Paclitaxel ⁴	≤ 1.5 mg/dL 75%		1.6 – 30 mg/dL 40%				
Vinblastine ^{1,4}	100%		50%		Omit ¹ 25% ⁴		Omit
Vincristine ^{1,4}	100%		50%		Omit ¹ 25% ⁴		Omit

References:

1. King PD, Perry MC. Hepatotoxicity of chemotherapeutic agents. Chapter 40. In: The Chemotherapy Sourcebook, 3rd Edition. Editor: Michael C Perry, Lippincott Williams and Wilkins 2001.
1. [King PD, Perry MC. Hepatotoxicity of chemotherapy. *Oncologist* 2001;6:162 – 76.](#)
2. Docetaxel Package Insert. Aventis Pharmaceuticals, 2004.
3. [Clinical Pharmacology Online](#) – various monographs. Accessed 03/31/05
4. [Raymond E, Boige V, Faivre S, et al. Dosage adjustment and pharmacokinetic profile of irinotecan in cancer patients with hepatic dysfunction. *J Clin Oncol* 2002;20:4303 – 12.](#)