



# Hamilton Institute

Value of Pharmacokinetic and  
Pharmacodynamic Modelling for  
Tumour Patients

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## **Abstract:**

In cancer chemotherapy, despite dose adaptation to body surface area for classical cytotoxic agents and some novel 'targeted therapies', the degree of interpatient variability in effects is large: Some patients fail to respond, whereas others experience unacceptable toxicity. Pharmacokinetic analysis of (sparse) concentration-time data in oncology have provided useful and sometimes crucial information during drug development and therapeutic use. However, only few (population) pharmacodynamic models have been presented, mostly focussing on myelosuppression as the most common, often dose-limiting toxicity. Myelosuppression, especially neutropenia makes patients highly susceptible to pathogens resulting in life-threatening infections or even death.

This presentation will focus on pharmacokinetic and pharmacodynamic modelling, especially mechanism-based population models, that may contribute to more rational drug development and optimal use of these drugs in tumour patients.

**Venue:** Seminar Room, Hamilton Institute, Rye Hall,  
NUI Maynooth

**Time:** 2.00 - 3.00pm (followed by tea/coffee)

Travel directions are available at [www.hamilton.ie](http://www.hamilton.ie)