



Pacific Institute *for the*
Mathematical Sciences

PIMS - UVic Distinguished Lecture

Thursday, March 26, 2020

1:30 – 2:30 pm

DSB C122

University of Victoria



Nancy Flournoy
Curators Distinguished Professor
Statistics, University of Missouri

The Rise of Early Phase Clinical Trials

Phase I clinical trials explore the toxicity of new therapeutic agents. Phase II trials seek to establish some sign of efficacy. But practical applications vary creating a suite of statistical expressions for these trials' goals and objectives. There is now a robust statistical literature on these topics. We review the development of adaptive dose selection procedures in early phase clinical trials. We will show how a suite of modern approaches developed out of classical stochastic approximation, random walks and optimal design theory. Critical effects that design choices have on analysis procedures are described. We focus on the distinguishing concepts and goals behind the various approaches.