

<u>Approximate* Elapsed</u>	Myocardial Ischemia / Cardiac Arrest Scenario	Malignant Hyperthermia Scenario
Time (min)		
Prior to start time	Primary anesthesiologist enters case (gastrectomy for cancer, patient has history of stable angina and hypertension)	Primary anesthesiologist enters case (knee arthroscopy, healthy patient, succinylcholine used for relaxation for intubation, isoflurane in use for maintenance of anesthesia)
PHASE 1		
0 - 5	Quiescent period	Quiescent period
5 - 15	Patient responds to surgical stimulus: Hypertension, increased HR Progressive ST depression (to -2 mm) Occasional PVCs Frequent PVCs Runs of VTach	HR slowly increases (to approx 100 - 120) Hypertension Surgeon makes side-comment on rigidity of leg VCO ₂ increases approximately 2-3 fold (at typical initial MV, ETCO ₂ would be 80 mm Hg) Temperature slowly increases (from approximately 36° C to 42° C) Frequent PVCs begin
15	Ventricular Fibrillation (regardless of prior antiarrhythmic or antianginal therapy)	(Typically): Diagnosis of malignant hyperthermia made
PHASE 2		
15 - 30	Ventricular Fibrillation continues until: CPR performed satisfactorily Epinephrine administered Defibrillation	Typically: Treatment of malignant hyperthermia with: Hyperventilation, 100% FiO ₂ , termination of isoflurane Dantrolene Cooling Measures
15 - 30	Post-resuscitation state: Hypotension Tachycardia or bradycardia Continued ectopy	Dantrolene: Begins to reverse all abnormalities Cooling: Blunts temperature rise Lidocaine: Eliminates PVCs

* Scenarios did not follow an exact clock, but did follow these outlines. Times given are approximate and are typical for an average simulation run.

Gaba DM, Howard SK, Flanagan B, Smith BE, Fish KJ, Botney R. Assessment of Clinical Performance During Simulated Crises Using Both Technical and Behavioral Ratings, Anesthesiology 1998; 89.