

**2018 ACMT Annual Scientific Meeting
FIT Open Mic**

Presenter: Theresa Kim, MD

Title: The Assassination of North Korean President's First Born Son, Kim Jong Nam

Abstract: On February 13, 2017 the brother of North Korean president, Kim Jong Nam, expired in Malaysia's International Airport. Moments before his death security footage showed two women smearing a substance on his face. About ten minutes later he developed seizures and collapsed. An ambulance was called, however, Mr. Kim died en route. Autopsy results revealed VX on his face.

Who was Kim Jong Nam? He was the first born son of North Korea's prior President, Kim Jong Il. For much of his life he was the potential North Korean heir. However, by 2003 his younger brother began to rise to power. Many speculated that his brother, the current president, assassinated Kim Jong Nam to eliminate threats to his leadership.

Although VX was identified in the autopsy, some question whether this was actually the agent used. VX is a viscous nerve agent that persists in the environment. It inhibits acetylcholinesterase, resulting in elevated acetylcholine. Agonism of muscarinic acetylcholine receptors leads to the constellation of symptoms summarized by the mnemonic SLUGBAM. Stimulation of nicotinic cholinergic receptors results in muscular contraction, and paralysis. Uncontrolled agonism of centrally located acetylcholine receptors causes altered mental status and seizures. Treatment includes atropine, 2-PAM, benzodiazepines, and supportive care.

Review of the footage and an understanding of VX help answer questions such as why nearby bystanders were unaffected, and perhaps why two women—not just one—were involved. This lecture will attempt to answer and explain the evidence for or against VX in Kim Jong Nam's death.

Objective 1: Describe the timeline of Kim, Jong Nam's death and his presentation of illness.

Objective 2: Analyze clues from available video footage and media accounts to identify if Kim Jong Nam was in fact poisoned by VX gas, or if other potential agents should be added to the differential diagnosis.

Objective 3: Discuss the pathophysiology, diagnosis, and management of VX gas.