SIMulatED

Royal Darwin Hospital Emergency Department

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# Scenario Run Sheet: oncology: tumour lysis syndrome

## Scenario Overview

**Estimated Scenario Run Time:**  15-20 mins

**Estimated Guided Reflection Time:** 20-30 mins

**Target Group:** ED Registrars and Nurses

**Brief Summary:** 64 yo female with known metastatic SCC lung presents with acute dyspnoea and shock from malignant pericardial tamponade

## Learning Objectives

**General**

Resus team communication

**Scenario Specific**

Structured approach to severe dyspnoea and shock in oncology patients

Rationale for treatment of reversible complications of cancer vs initiation of end-of life care

Support for patient and family

Indications for pericardiocentesis

## Equipment Checklist

**Equipment**

I sim

Adult Resus trolley

**Medications and Fluids**

Giving set, Normal saline, plasmalyte, mero, vanc, clinda

RSI/sedation drugs (M+M)

**Documents and Forms**

ED Nursing chart, FBC, ETG nec fas, Vanco LD chart

**Diagnostics Available**

CXR – poor inflation

ECG – ST depression/TWI anterolateral. Clinic documentation. Careflight documentation. Istat result

VBG –mixed resp/metabolic acidosis, creat 180, K 4.2, Gluc 22, Ketones 2.0. UA: bloods, prot, gluc

## Scenario Preparation/Later Parameters

**Initial Later**

GCS **10** RR 30 P 140 BP 85/50 GCS **3(T)** RR vent HR 130

Sats 93% NRB T 37.8 BSL gas SaO2 95% O2 BP 100/60 T 38.2

**Mannequin Features**

Male 3G mannequin, abdo wall obese with cellulitis and insulin needle marks

## Participants

**Staff Actors**

ED Registrars x3, CF reg Radiographer

Nurses x3ED, CF RN ED Consultant available by phone

 ICU + SACU reg referral by phone

**Instructor Roles**

- Provide the team with clinical signs, bedside diagnostics, CXR

## Candidate Instructions/Triage Information

It is 0200h. You are informed by the triage RN that the Careflight helicopter is 15 mins away with a 45yo male with sepsis from abdominal wall cellulitis. Sudden drop in BP to 80-50 upon landing in Darwin, being given IV fluids and aramine, currently GCS 13, RR 30, HR 140, SaO2 94% NRB, T 37.8, BSL 22. Had been given IV flucloxacillin 1g in community.

## Patient Instructions

Confused, no history

**Medical History (careflight MO)**: DM-2 on lantus 18U daily, actrapid 10-12U tds, metformin and gliclazide; Irbesartan, aspirin and simvastatin. **Estimated weight 90kg**

**Social** Smoker/drinks daily. Manages a Batchelor petrol station, lives with wife (driving to Darwin)

HPC: seen by Batchelor GP with fevers and infected insulin injection sites not responding to 3 days diclox. Increasing fevers, malaise; started vomiting and became confused on waking yesterday. GP reviewed 4 hours ago : Glucose 26, BP initially 100/80, HR 120, T 38.5, - gave IV fluclox, antiemetics, paracetamol and insulin 6 units. Helo dispatched: on arrival at clinic: Confused GCS 13, BP 90/60, HR 130, T 38.2, RR 30, SaO2 95 on 4L. Bibasal creps, tender swollen Left abdo wall, no palpable surg emphysema or discharge. Given 2 L N Saline and 1g meropenem with HR 120, BP 105/60. Istat: (hands over slip)

5 mins from Darwin airport: drop in GCS to 10, HR 130, BP 80/50: given further 1 L saline and peripheral aramine, temp increase BP to 95/60; total 6mg. Last 1mg bolus given just before arriving at ED.

## Proposed Scenario Progression

* Preparation of resus team, medications and equipment prior to arrival. Early notification of ED consultant on call, surgical and ICU teams. NRC/nurse TL organise ground transport from h/pad to ED
* Team performs focused primary survey while handover occurs simultaneously
* Difficulty removing transport bridge requires assessment / continuation of resuscitation by ED team prior to transfer to ED bed
* Identifies severe sepsis complicated by type 2 respiratory failure and DKA
* Delivers appropriate antibiotics (+ septic screen) for presumed necrotising fasciitis (mero, clinda, vanc) + instigates DKA therapy
* Provides update to Surg/ICU to escalate review
* Establishes appropriate CVC and arterial vascular access and titrates fluid and inotrope support followed by suitable RSI (in shocked patient) and ventilation; performs post-resuscitation care
* Commences fluid, blood glucose and acid-base monitoring
* Team confers on disposition (considers stability for CT assessment vs ICU v theatre for debridement)
* Liaison with family (debrief)