Galway: GAPP - Galway Antimicrobial Prescribing Policy / Guidelines (GAPP): Initial management of neutropenic sepsis - Algorithm			
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IMMEDIATE ASSESSMENT

## Neutropenic Sepsis Guidelines GUH - INITIAL Management

## Suspicion of Neutropenia and Fever OR Clinical Signs of Sepsis

Assess immediately as an emergency Neutrophils < 0.5 x 10<sup>9</sup>/L or <1 x 10<sup>9</sup> /L and falling

Temp  $\geq$  38.3°C one time or sustained  $\geq$  38° over one hour

Start sepsis form and take blood cultures

Review previous microbiology for history of colonisation /infection with antibiotic resistant organisms & assess other risk factor for antibiotic resistance.

If colonised with Multi-drug Resistant Organisms (MDRO) discuss with Microbiology/Infectious Diseases (ID). The regimens below may NOT cover MDRO in all cases. See note on MDRO

## Assessment

\*FULL history & exam \*FBC, onc-profile, CRP, Coag, Lactate \*Septic screen \*Blood cultures -

peripheral and central \*Other samples as clinically indicated \*CXR

\*Consider ABG (if platelets >50) \*Pulse oximetry

Any signs of sepsis or septic shock (see sepsis form) Contact haematology/

oncology registrar or consultant on call & consider need for anaesthetic review

Complete Sepsis Six within 1 hour

Take 3: blood cultures, blood tests, urine output Give 3: O2, Fluids, Antibiotics

Antibiotics must be given as soon as possible, then discuss with Microbiology or ID.

Meropenem should be considered as first-line treatment in patients who are critically ill with sepsis OR have a history of a Gram-negative MDRO. Discuss use of Meropenem with Microbiology or ID. If meropenem is essential in a patient with a history of severe penicillin allergy e.g. anaphylaxis, close monitoring is required for cross sensitivity e.g. in ICU.

## Check allergy status and give antibiotics immediately after taking blood cultures

No penicillin allergy	Penicillin allergy: delayed onset non-severe reaction	Penicillin allergy: immediate or severe delayed reaction	
Piperacillin/tazobactam IV 4.5g every 6 hours PLUS	Meropenem IV 1g every 8 hours	Give first doses, THEN IMMEDIATELY discuss on-going therapy with Microbiology or ID	
Either	Consider need for Vancomycin IV infusion	Aztreonam IV 2g every 8 hours PLUS	
Gentamicin IV One dose per GAPP App calculator. OR	dose per GAPP App calculator (see below)	Vancomycin IV infusion dose per GAPP App calculator PLUS	
If multiple myeloma* Ciprofloxacin IV 400mg every 8 hours		Either  Gentamicin IV  one dose per GAPP App calculator	
Consider need for Vancomycin IV infusion dose per GAPP App calculator		OR  If multiple myeloma*  Ciprofloxacin IV	
(see below)		400mg every 8 hours	
*In a haemodynamically unstable patient with multiple myeloma, benefit of gentamicin might outweigh risk – discuss with haematology consultant			
Suspected line infection	<ul><li>dose) IF</li><li>Septic shock/haemodynamica</li></ul>	*	
<ul> <li>Skin /Soft tissue infection</li> </ul>	MRSA colonization or infection     Pneumonia		

DAILY REVIEW

Review Gentamicin (or Ciprofloxacin) after 24 hours, then daily. Continue ONLY if consultant or registrar recommended.

Review patient daily, or more often if indicated.

Reassess treatment at 48 hours - see algorithm below for continuing management.

For information on further treatment, investigations and monitoring, please see Haematology Guidelines for the Management of Adult Febrile Neutropenic Patients in Galway University Hospitals on Qpulse

(click on image to enlarge)