**Name:**

**Unit no:**

**DOB:**  *Affix label here*

***This form should be completed in its entirety and will be used for audit purposes. Use follow-up sheets while patient remains on AAU.***

**Suspected Neutropenic Sepsis Pathway**

**At risk:** patients who have received chemotherapy in the last three months **OR** patients who have neutropenia secondary to bone marrow failure (eg Myelodysplastic Syndrome)

**Antibiotics for treatment of neutropenic sepsis in adults**

|  |
| --- |
| * **Infection can progress within hours. Antibiotics must be prescribed and administered within one hour of presentation, according to patient risk** * **Do not delay first dose of antibiotics. These can be given before a full history is taken, and before blood results are available.**   **Definition of neutropenic sepsis/febrile neutropenia:**   * Neutrophil count <1.0 x 10⁹/l **AND** temperature of 37.5˚C or above **OR** 34˚C or below * Any bone marrow transplant patient with a temperature of >37.5˚C |

|  |
| --- |
| **Allergies:** |

|  |  |  |
| --- | --- | --- |
| **Multinational Association for Supportive Care in Cancer (MASCC) Scoring Index** | | |
| **This index assesses the risk of serious medical complications for at-risk patients and should only be calculated once, at point of admission.**  **Note: a score of ≥ (greater than or equal to) 21 is low risk and a score of < (less than) 21 is high risk** | | |
| Characteristic |  | **Score** |
| Age | ≥ 60 | 0 |
| < 60 | 2 |
| Dehydrated and requiring IV fluids | Yes | 0 |
| No | 3 |
| Hypotension | SBP <90 mmHg | 0 |
| SBP ≥90 mmHg | 5 |
| COPD (formal diagnosis of COPD – including chronic bronchitis or emphysema, **OR** requires regular bronchodilators or long term oxygen) | Yes | 0 |
| No | 4 |
| Solid tumour **OR** b) Lymphoma with no history of invasive fungal infection | Yes | 4 |
| No | 0 |
| Symptoms related to this episode of febrile neutropenia eg fever, altered mental status, haemodynamic instability, focus of infection  (None: mild, easily tolerated ; moderate: requiring treatment for symptoms; severe: incapacitating) | None | 5 |
| Moderate | 3 |
| Severe | 0 |
| Inpatient at the time of fever onset | Yes | 0 |
| No | 3 |
| **Total score** |  | |

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***Note: Full assessment & treatment guidelines for management of adult patients with NS found on Intranet.***

|  |  |
| --- | --- |
| **Administration of antibiotics** | |
| **Low risk patients with a MASCC score of ≥ 21.** If not already on oral antibiotics, and able to take oral treatment, these patients may be treated with **oral antibiotics**  *These patients should be observed for 24 hours prior to discharge.* | **Not penicillin-allergic:**   * Ciprofloxacin 500mg BD po + Co-amoxiclav 625mg TDS po   **Penicillin-allergic:**   * Ciprofloxacin 500mg BD po + Doxycycline 200mg OD po, then 100mg OD po |
| **High risk patients with a MASCC score of < 21  OR** any patient with Acute Leukaemia, Burkett’s Lymphoma, previous stem cell transplant (bone marrow transplant)  **OR** patients not eligible for oral antibiotics – treat with **IV antibiotics** | **Not penicillin-allergic:**   * Piperacillin/Tazobactam (Tazocin®) IV 4.5gm stat and then every six hours   **and separately**   * Gentamicin STAT DOSE (once renal function is known) 5mg/kg once a day(4mg/kg once a day if over 70 years of age) or adjusted for renal function. If high risk of gram –ve sepsis or hypotensive continue Gentamicin – adult dose with appropriate renal function checks   **Note: These two drugs must not be given concurrently. Administer sequentially with a 10ml NaCl 0.9% flush in between**  **Penicillin-allergic:**   * Meropenem 1g tds stat then every 8hrs (if non severe previous reaction – if severe contact Microbiology Consultant to discuss)   **and separately**   * Gentamicin (once renal function is known) 5mg/kg once a day(4mg/kg once a day if over 70 years of age) or adjusted for renal function |
| **Time of antibiotic administration:** |

**Baseline Observations & SEVERE SEPSIS SCREEN (if 2 or more criteria do venous blood gas and complete SEPSIS SIX PATHWAY)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| BP: Systolic <90 | Pulse: >90 | Temp: >38.3˚C | RR: >20 | GCS: Confused / Drowsy | O2 SATs:  WCC <4 or >12 | SOS score >5 or =5: | BM: >7.7 if not known diabetic |

|  |  |  |  |
| --- | --- | --- | --- |
| **Is the patient shocked?** | **Yes** | **No** | **If ‘YES’ or SOS 2 or >2 to any of these, discuss patient with medical registrar**  **Time SpR informed:** |
| Pulse > 100 bpm |  |  |
| Pale/sweaty/mottled skin |  |  |
| Confused/falling GCS |  |  |
| Increased respiratory rate > 20/min |  |  |
| Blood pressure systolic <90 mmHg |  |  |
| Lactate test |  |  |

**Name:**

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**Record of Admission**

|  |  |
| --- | --- |
| **Time arrived:** | **Time first seen by doctor:** |
| **Triage time:** | **Doctor:** |
| **Triaged by:** | **Bleep number:** |

**History and Examination**

|  |  |  |  |
| --- | --- | --- | --- |
| * Assess for clinical evidence of infection, oropharynx, sinuses, perineum, skin lesions, central venous lines, UTI, chest infection, D&V. * **Avoid rectal and vaginal examination due to the risk of introducing infection.** | | | |
| **Date:** | | **Date of last chemotherapy  treatment:** | |
| **Time:** | | **Treatment regimen:** | |
| **History** | | | |
| **Regular medications** | **Frequency** | | **Dose** |
|  |  | |  |
|  |  | |  |
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**Name:**

**Unit no:**

**DOB:**  *Affix label here*

|  |  |
| --- | --- |
| **General Appearance**  Jaundice / Pallor / Clubbing / Cyanosis / Oedema / Lymphadenopathy | |
| **Cardiovascular**  Pulse character Peripheral Pulses  JVP  Heart sounds | |
| **Respiratory**  Peak flow  Breath sounds | |
| **Abdomen** | |
| **Locomotor/Skin**  PICC/Hickman Line | |
| **Nervous System** | |
| **CXR findings** | **ECG** |

**Name:**

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**Investigations**

|  |  |  |
| --- | --- | --- |
|  | Investigations requested/sent | Results seen |
| Blood cultures: take from both peripheral and central line |  |  |
| MEDA bloods – INFORM BIOCHEMISTRY OF URGENT SAMPLE (ph 4291, bleep 1147) |  |  |
| Throat swab |  |  |
| Urine culture, sputum culture and stool culture if diarrhoea |  |  |
| Urgent CXR if chest signs/hypoxia, otherwise routine CXR |  |  |

**In-patient Blood Tests and Results**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date and time of results** | | | |  | **Date and time of results** | | | |
| **Hb** |  |  |  |  | **Na** |  |  |  |
| **MCV** |  |  |  |  | **K** |  |  |  |
| **WBC** |  |  |  |  | **Urea** |  |  |  |
| **N/L** |  |  |  |  | **Glu** |  |  |  |
| **Plat** |  |  |  |  | **Creat** |  |  |  |
| **INR** |  |  |  |  | **TP** |  |  |  |
| **APTR** |  |  |  |  | **Alb** |  |  |  |
| **ESR** |  |  |  |  | **AST** |  |  |  |
| **CRP** |  |  |  |  | **GGT** |  |  |  |
|  |  |  |  |  | **Bil** |  |  |  |
| **TSH** |  |  |  |  | **Alp** |  |  |  |
| **FT4** |  |  |  |  | **Ca** |  |  |  |
| **Chol** |  |  |  |  | **PO** |  |  |  |
| **TGs** |  |  |  |  |  |  |  |  |
| **Fer** |  |  |  |  |  |  |  |  |
| **B12** |  |  |  |  |  |  |  |  |
| **Folate** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

**Provisional/differential diagnosis**

|  |
| --- |
|  |

**Name:**

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**Registrar/SHO Review (if appropriate)**

|  |
| --- |
| **Date:** |
| **Time:** |
| **Notes:** |

**Physiological Monitoring Plan – 2 hourly**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SOS** |  |  |  |  |
| **BM** |  |  |  |  |
| **Neuro** |  |  |  |  |
| **GCS** |  |  |  |  |

* **Notification of Haematology/Oncology team – see below for contact details**
* **If for ICU/HDU admission, contact team ASAP**
* **If routine admission, notify on next working day**

**Haematology**

* Monday to Friday: 9am – 5pm, Haematology SpR – bleep 1285 or 2162
* Out of hours: on-call haematologist via switchboard

**Oncology**

* Monday to Friday: 9am - 5pm, Speciality Doctor – bleep 1744, or Tina Churchill – bleep 1942, or fax (white slip) referral to oncology secretaries on ext 4334
* Out of hours: on-call oncology SpR at Oxford, tel: 01865-741841 (short dial 7 166) and ask for on-call oncology SpR

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**Post-take Consultant Ward Round**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Consultant:** | | **Date:** | | **Time:** | |
| **Review of History and Examination:** | | | | | |
| **Results of relevant investigations:** | | | | | |
| Neutrophil count: |  | | Other: | |  |
| Creat: |  | |  | |  |
| CXR: |  | |  | |  |
| ECG: |  | |  | |  |
| Urinalysis: |  | |  | |  |

**Name:**

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|  |  |
| --- | --- |
| **Provisional/differential diagnosis:** | |
| **Low risk patient: YES/NO** | |
| **If low risk, eligible for discharge at 24h? (see below)** | **Yes/No** |
| Clinically stable |  |
| Symptomatically improved |  |
| Temperature significantly decreased |  |
| Able to return to hospital in the event of antibiotic intolerance or deterioration |  |
| Issue with patient information leaflet and advise 3x daily recording of temperature |  |
| **If ‘YES’ to all, home to complete a course of 7x days oral antibiotics and advise to call if recurrent fever, antibiotic intolerance or deterioration.**  **Must have 24-hour contact numbers for Dove Ward/DTC. Mon – Fri 9am – 5pm 01793 604348**  **Sat / Sun / Bank Holidays and between the hours of 5pm – 9am – 017963 604400**  **Inform Dove Ward of discharge 4421** | |
| **Management Plan Jobs booked Results seen**  **1 .………………………………………………………… ………………. ………………**  **2 .………………………………………………………… ………………. ………………**  **3 .………………………………………………………… ………………. ………………**  **4 …………………………………………………………… ………………. ………………**  **5 …………………………………………………………… ………………. ………………** | |

**Signed ……………………………………… Name ………………………….. Bleep …………..**

**Expected length of stay: <24hrs 24-72hrs <1 week >1 week**

**Preferred ward (please circle): Respiratory Dove Other………………….**