



Side Effect Management: Nurse Experience

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Objectives

- ❑ Discuss side effects (SE) of tyrosine kinase inhibitors (TKI) used in CML treatment
- ❑ Provide awareness of specific TKI SE profile
- ❑ Suggest practical advice and nursing support how to manage SE and other symptoms
- ❑ Who can help to manage SE?
- ❑ What are the useful CML resources and links?



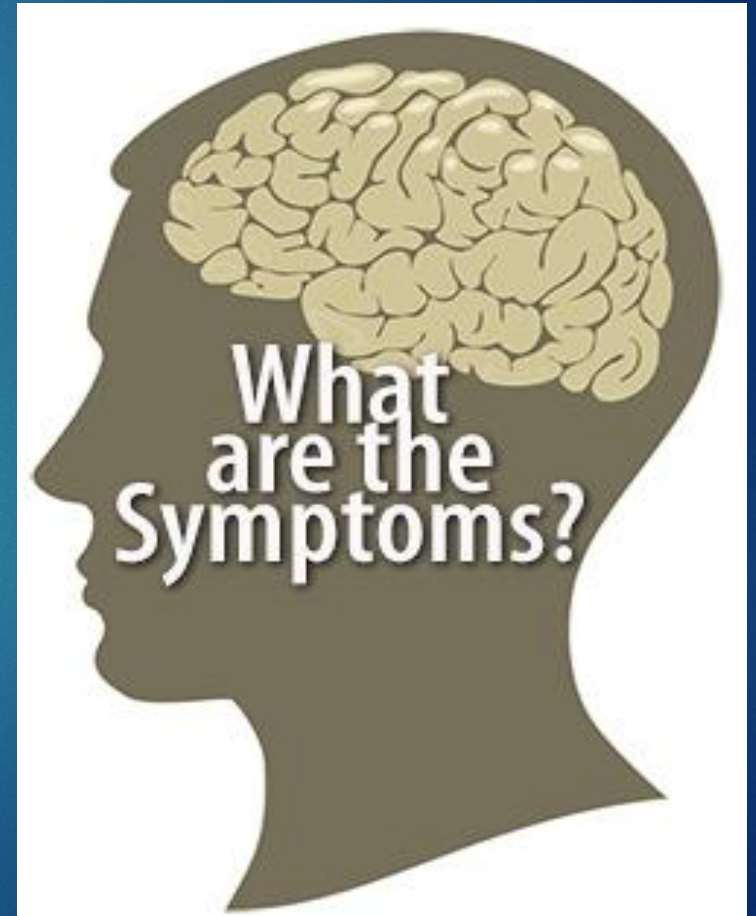
Overview

- ❑ TKI side effects can be debilitating
- ❑ Side effects are very individual
- ❑ Early reporting of SE is vital to allow treatment to continue
- ❑ Medication adherence and compliance is important to maintain excellent response to treatment
- ❑ Minimising SE symptoms can help achieve better quality of life



Side Effects that are common to All TKI's

- Bone pain
- Diarrhoea
- Fatigue
- Fluid retention
- Headaches
- Heartburn/Indigestion
- Joint pains/muscle pain
- Muscle cramps
- Nausea
- Skin rash
- Abnormal blood counts
- Abnormal liver/kidney function





Specific Side Effects of TKI's

Imatinib	Dasatinib	Nilotinib	Bosutinib	Ponatinib
Weight gain	Headaches	Skin rash	Diarrhoea	Dry skin
Fluid retention (periorbital oedema)	Abdominal cramps	Increase in blood glucose	Abdominal pain	High blood pressure
Dry gritty eyes	Fluid in lungs (pleural effusion)	Increase in cholesterol levels	Fluid retention (periorbital oedema)	Inflammation of pancreas
Nausea	Low platelets (Thrombocytopenia)	Rare-clots in the arteries of heart, brain and lower legs	Abnormal liver function	Clots in the arteries of the heart, brain and lower legs
Hypopigmentation	Constipation	Constipation	Increase in serum lipase	
Renal impairment	Rare- blood in stool; colitis; pulmonary arterial hypertension			
Hair loss	Rare – Panniculitis			



Management of SE Symptoms

Symptoms	Practical Management
Bone/muscle pain	<ul style="list-style-type: none"> Assess pain severity Paracetamol with dose caution NSAID Ibuprofen Warm compress (heat packs) Light to moderate exercises
Constipation	<ul style="list-style-type: none"> High fibre fruits and vegetables Adequate fluid intake Increase physical activity Mild Laxatives, stool softeners
Diarrhoea	<ul style="list-style-type: none"> Adequate fluid intake Anti-diarrhoea tablet-Loperamide
Fatigue	<ul style="list-style-type: none"> Set priorities; ask help if needed Regular exercises-yoga, meditation Daily nap Lifestyle modifications-work, activities



Symptoms	Practical Management
Heartburn/Indigestion	<p>Common to person with GI reflux</p> <p>Avoid overeating</p> <p>Avoid spicy foods</p> <p>Reduce caffeine/alcohol intake</p> <p>Use antacids , H2 blockers, Proton pump inhibitor i.e. Lansoprazole, Omeprazole (be aware of drug interaction)</p>
Abnormal blood counts (White cell count, Haemoglobin, Platelets, Neutrophils)	<p>Close monitoring of blood results</p> <p>May require dose interruption or dose reduction</p> <p>Consider transfusions if indicated</p> <p>Consider GCSF (Filgrastim)</p> <p>Discuss with haematology doctor</p>
Muscle and Joint Pain	<p>Can be difficult to treat if persistent</p> <p>Check Vit D level</p> <p>Paracetamol and NSAID (Ibuprofen) with caution risk of GI bleeding, renal functions</p>



Symptoms	Practical Management
Muscle cramps	<p>Calcium, magnesium and potassium level should be checked</p> <p>Calcium and magnesium supplements</p> <p>Tonic water is effective</p> <p>Adequate fluid intake</p> <p>Dark chocolate</p>
Nausea/Vomiting	<p>Very common during 1st weeks of therapy</p> <p>Be aware of correct TKI intake</p> <p>Antiemetics/Antinausea-Ondansetron</p>
Skin itchiness and rash (Hypersensitivity and photosensitivity)	<p>Apply skin moisturiser</p> <p>Avoid direct sunlight</p> <p>Use high factor sun screen</p> <p>Topical hydrocortisone cream</p> <p>Antihistamines-cetirizine, loraditine</p> <p>Consider steroid tablets in severe cases</p>



Symptoms	Practical Management
Weight gain	Regular physical exercises Healthy eating habits/reduced calorie intake Decrease sodium intake Monitor thyroid function
Abnormal Liver/Renal Functions/Blood Glucose	Close monitoring of blood results May require dose interruption or dose reduction Discuss with haematology doctor
Pleural Effusions (Fluid in the lung) i.e. shortness of breath, cough, chest pain	Chest X-ray STOP Dasatinib Diuretics (water tablet) Severe Cases-fluid drainage and steroids



Patient Issues

- Side effect management
- Medication adherence and compliance
- Drug access
- Lifestyle Changes
- Patient Education
- Self Management
- Patient Quality of Life





Patient Centred Care

The four principles of person-centred care





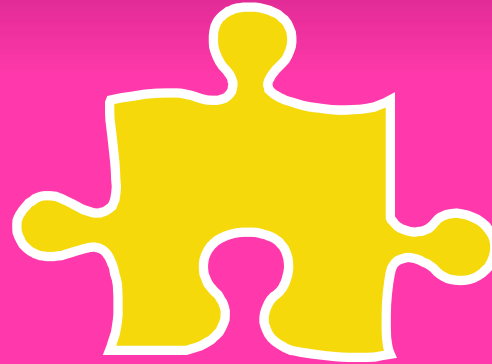
Role of Clinical Nurse Specialist (CNS)



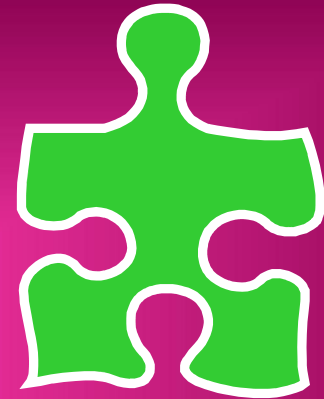
Care Delivery Approach



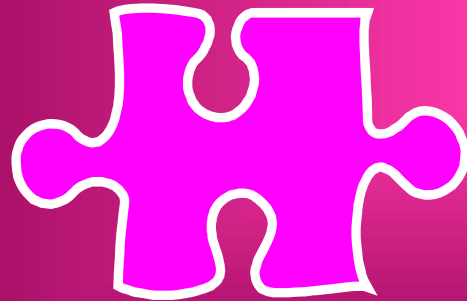
Patient Advocate



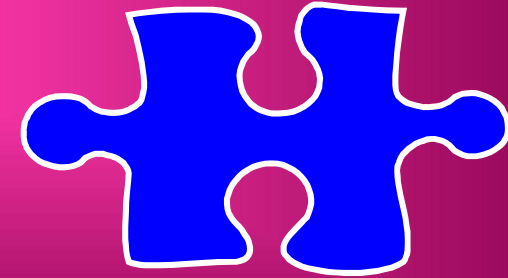
Patient Centred Care



Educator – Patient and family



Key Worker



Coordinator/
Service Delivery



Holistic Needs Assessment

- ❑ Identifies patients who needs help
- ❑ Opportunity for patient reflect on their needs
- ❑ CNS can develop a nursing care plan
- ❑ Promote self management
- ❑ Assist HCP target support & care needs
- ❑ Promote good patient experience



Who can help to manage SE?

- Haematology Consultant, Doctors, GP
- Clinical Nurse Specialist
- Pharmacist
- Clinical Psychologist
- Relatives/family member
- Support groups - CML advocates



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CML Links and Resources



<https://www.cmlsupport.org.uk/>



<http://www.cmladvocates.net/>



<https://www.leukemia-net.org/>



<https://www.cml-foundation.org/>



<http://www.nationalcmlsociety.org/>



<http://www.cancerresearchuk.org/>



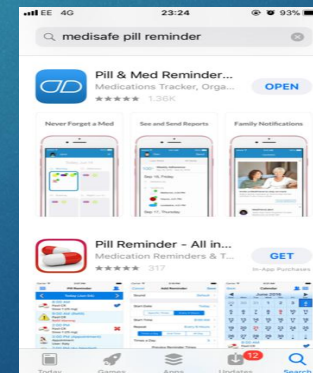
<https://bloodwise.org.uk/>



<http://www.leukaemiacare.org.uk/>



<https://www.macmillan.org.uk/>



Medisafe pill reminder app





The Way Forward

Patient care requires holistic nursing approach

Determination and resiliency can help achieve best possible outcome

Monitoring response to TKI therapy is a critical component

Optimization medication adherence, side effect management and improve quality of life is a priority

Collaborative partnership between patient and healthcare professional is essential



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***Things will get
harder before they
get better!!!***





WHEN YOU'RE A
NURSE,
you know that
EVERY DAY
YOU WILL
TOUCH A LIFE
OR
A LIFE WILL
TOUCH YOURS. 

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Thank You for your Attention!

