



# COUNSELLING OF ORAL CHEMOTHERAPY

# MEDICATION ALECENSA (ALECTINIB)



# **DOSE/FDA INDICATION**

- Anaplastic lymphoma kinase
- · positive Metastatic non small cell lung cancer
- 600mg PO Bid

#### **MONITORING PARAMETERS**

Black Box Warning: None

Baseline&Periodicall: Liver functions Tests, heart rate, Blood Pressure

#### **KEY COUNSELLINS POINTS**

#### **Administration**

- Take with food
- If dose is missed or vomiting occurs after taking adose,take the next dose at the scheduled time
- Store in the original container to protect from light
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

fatigue, constipation, edema, myalgia, dysnea, anemia

#### REFERRENCE:



# MEDICATION FEMARA (LETROZOLE)



# DOSE/FDA INDICATION

• Breast Cancer 2.5mg PO daily

#### MONITORING PARAMETERS

**Base line & Periodically:** 

Liver functions tests, Billirubin q3-6 months, bone density

#### **KEY COUNSELLINS POINTS**

#### **Administration**

- · Take with food or on empty stomach with glass of water or juice
- Pregnancy factor:X
- Avoid pregnancy while on therapy
- For post menopausal only

### **Adverse Drug Effects:**

cardiotoxicity increase ischemic events, muscloskeletal disorders, sexual dysfunctions vaginal dryness, If hot flushes take tablets at bed time

#### REFERRENCE



# MEDICATION ARIMEDIX (ANASTRAZOLE)



# **DOSE/FDA INDICATION**

Breast Cancer .1mg PO daily

#### **MONITORING PARAMETERS**

Base line & Periodically:

Liver functions tests, Billirubin q3-6 months, bone density

#### **KEY COUNSELLINS POINTS**

#### **Administration**

- Take with food or on empty stomach with glass of water or juice
- Pregnancy factor:X
- Avoid pregnancy while on therapy
- For post menopausal only

### **Adverse Drug Effects:**

cardiotoxicity increase ischemic events,muscloskeletal disorders, sexual dysfunction,vaginal dryness, If hot flushes take tablets at bed time

#### REFERRENCE



# MEDICATION AROMASINE (EXEMESTANE



# DOSE/FDA INDICATION

• Breast Cancer 25 mg Per oral daily

#### **MONITORING PARAMETERS**

Base line & Periodically:

Liver functions tests, Billirubin q3-6 months, bone density

#### **KEY COUNSELLINS POINTS**

#### **Administration**

- Take after food with glass of water or juice to reduce risk of nausea
- Pregnancy factor :X
- Avoid pregnancy while on therapy For post menopausal only

### Adverse Drug Effects:

cardiotoxicity increase ischemic events, muscloskeletal disorders, sexual dysfunction, vaginal dryness, If hot flushes take tablets at bed time

#### REFERRENCE



# MEDICATION NOLVADEX (TAMOXIFEN)

# \*Significance of the second of

# **DOSE/FDA INDICATION**

Breast Cancer 20-40mg Per oral daily

#### **MONITORING PARAMETERS**

Black Box Warning:uterine malegnancies,stroke

Baseline & Periodically: CBC,Liver Tests,Platelets

Drug Drug Intercations: clopidogrel may increase tam toxicity INCREASE INR in patients on warfarin Qt prolongation effect

#### **KEY COUNSELLINS POINTS**

#### **Administration**

- Take with or with out food
- Doses more than 20 mg / day should be divided BID
- For pre & post menopause
- Pregnancy factor: D
- USE barrier or non hormonal contraceptive while on therapy and for 2 months after discontinuation of therapy

### **Adverse Drug Effects:**

**Asverse Drug Effects:** 

Cardiotoxicity(risk of thrombosis) Hepatotoxicity(↑liver enzymes) altered menses, fluid retention, if hot flushes take tab at bed time 2ndry malignancies (risk of endometrial & uterine cancer)

#### REFERRENCE:



# MEDICATION EMEND (APREPITANT)



# **DOSE/FDA INDICATION**

Anti nausea & vomiting 125mg,80mg,80mg

#### MONITORING PARAMETERS

**Drug Drug Interactions:** 

Cisapride ,pimozide ,terfenadine may cause life threatening interaction May decrease warfarin, oral contraceptives, phenytoin

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Route of admin:Per oral
- PATIENTS SHOULD RECEIVE PACKAGE OF 3 caps over 3 days Day 1 take 125mg cap by mouth one hr before chemo Day 2&3 take one 80mg cap by mouth each morning for 2 days
- Take with food or on empty stomach with glass of water
- Pregnancy RISK factor: B

#### **Side Effects:**

Diarrhea, hiccups, fatigue, constipation, Headache

#### REFERRENCE:



# MEDICATION BOSULIF (BOSITINIB)



## DOSE/FDA INDICATION

Chronic myeloid leukemia ph+CML Intolerant to prior therapy
 500 mg once daily Per oral

#### MONITORING PARAMETERS

Black Box Warning:NONE Baseline & periodically: CBC,Serum Creat,Liver Functions Tests ↓ dose to 200mg daily if LFT rise,5XUpper Limit Normal hold till,2.5XULN resume at 400mg

Crcl 30-50ml/min: 400mg (30ml/min: 300mg

Grade +3 diarrhea or myelosuppression ↓ dose by 100mg

Drug Drug Interactions: CYP3A4( diltiazem-amlodipine-alprazolam,

vincristine-nisoldipine

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- · Swallow tabs whole, do not crush or chew
- Take with food
- Avoid grapefruit/juice
- Missed dose should be taken if 12 hrs.
- Hazardous agent, use precautions when handling

### **Adverse Drug Effects:**

Hemorrage, Fatigue, Nausea,

#### REFERRENCE:



# MEDICATION GLEEVEC (IMATENIB)



# DOSE/FDA INDICATION

- Chronic myeloid leukemia ph+CML 400 mg Per oral daily
- Ph+Acute Lymphoblastic Leukemia 600 mg Per oral daily

#### MONITORING PARAMETERS

**Black Box Warning:NONE** 

Baseline& Periodically CBC,hold if ANC<1000 & PLTS<50000 LFTs hold if billirubin >3x ULN until <1.5 ULN Hold for severe fluid retention

Drug Drug Interactions:Anti fungal azoles may ↑imatenib effect Rifambicin may ↓ imatenib effect Ppi may ↑dermatologic toxic effect of imatenib

Digoxin-Tramadol-Codeine their effect may be decreased by imatenib CYP3A4( diltiazem-amlodipine-alprazolamvincristine-nisoldipine) May enhance warfarin effect

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Swallow tabs whole, may be dispersed in water/apple juice, stir until dissolved& use immediately

- Take with food& large glass of water to↓Gastro intestinal irritation
- Pregnancy risk factor:D
- May cause sterility in men and menopause in women, discuss with Dr if plan to have children
- Avoid grapefruit may ↑imatenib effect
- Doses, 400 mg should be administered BID

**Adverse Drug Effects:** cardiotoxicity, Fluid retention, myelosuppression, hepato toxicity, photosensitivity.rash, muscle cramps, fever, bleeding, diarrhea, rash

#### REFERRENCE:



# MEDICATION IMBRUVICA (IBRUTENIB)



# **DOSE/FDA INDICATION**

- Chronic myeloid leukemia, small lymphoblastic lymphoma 420 mg Per oral daily
- Mantle cell lymphoma 560 mg Per oral daily

#### MONITORING PARAMETERS

Black Box Warning:NONE Base line&Periodically: CBC,Renal&hepatic functions, Uric acid

**Drug Drug Interactions: CYP3A4 Substrate** 

(diltiazem-amlodipine-alprazolam-vincristine-nisoldipine)

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Swallow cap whole
- Take with or without food with full glass of water
- Take missed dose as soon as remembered if on same day
- Avoid grape fruits/juice
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

Myelosuppression,edema,dyspnea, Rash,Nause/Vomiting

#### REFERRENCE:



# MEDICATION INLYTA (AXITINIB)



## DOSE/FDA INDICATION

 Advanced renal cell carcinoma 5 mg Per oral BID Doses may be titrated to tolerability& if normotensive up to 10 mg BID if tolerated

#### MONITORING PARAMETERS

Black Box Warning:NONE Baseline &Periodically:
Liver Functions Tests/billirubin

Thyroid functions,urine analysis,Blood Pressure,heart function
Drug Drug Interactions: CYP3A4 substrate Avoid use with strong
CYP3A4 inhibitors if needed \$\psi\$dose by 50% then adjust

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Take with or without food with full glass of water

- If missed dose/vomit, an additional dose should not be taken
- Avoid grapefruit/juice
- Encourage BP monitoring at home
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

Hypertensioncrisis,heamorrage,cardiac failure,thromboembolic embolism, dyspnea, Fatigue,Nause/Vomiting

#### REFERRENCE:



# MEDICATION XELODA (CAPCITABINE)



# DOSE/FDA INDICATION

Metastatic breast cancer, refractory metastatic colon cancer 1250mg/m2 Per oral
 BID for 2 weeks then one week off

#### MONITORING PARAMETERS

Black Box Warning: warfarin interaction, frequently monitor INR

**Baseline&Periodically:** 

CBC, Liver Function Tests s, Serum Creat,

INR if concomitant warfarin

Crcl 30-50ml/min ↓ dose by 25%

for crcl<30ml/min hold dose

Drug Drug Interactions: Phenytoin, may↑serum phenytoin

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Swallow tab whole with water
- Taken within 30 min of food with glass of water
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

Myelosuppression,mucsitis,Nause/Vomiting, diarrhea, Hepatotoxicity, yellow eyes or skin,hyperbillirubinaemia Cardiotoxicity,fatigue

#### REFERRENCE:



# MEDICATION STIVARGA (REGORAFENIB)



# **DOSE/FDA INDICATION**

 Metastatic colorectal cancer after failure of folfox/folfiri,bevacizumab, cetuximab 160 mg Per oral daily on day 1 to day 21 then one week off of 28 days cycle

#### **MONITORING PARAMETERS**

**Black Box Warning:** 

Hepatotoxicity Baseline&Periodically: CBC,Liver Functions Tests, Blood Pressure

Drug Drug Interactions: CYP3A4substrate Warfarin may ↑ toxicity of stivarga &bleeding

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Swallow tabs whole with water
- Take with food
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

Hepatotoxicity,heamorrage,Gastro I ntestinal perforation , Hypertension,mucositis,Nausea/vomiting

#### REFERRENCE:



# MEDICATION TYKERB (LAPATINIB)



### DOSE/FDA INDICATION

- Metastatic HER2+ breast cancer in combination with Xeloda: 1250 mg
   Per Oral days 1-21
- Metastatic HER2 + breast cancer in combination with Femara:
   1500 mg Per Oral daily

#### MONITORING PARAMETERS

Black Box Warning:Hepatotoxicity Baseline & Periodically: CBC,Liver Functions Tests,ECG,Electrolytes

Drug Drug Interactions:: CYP3A4 substrate Ketoconazole may ↑ lapatinib plasma conc Carbamazepine may ↓ lapatinib plasma conc H2 blocker&Proton Pumo Inhibitors, may ↓ lapatinib plasma con QT prolongation additive effect with anti arrhythmi

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Take on empty stomach 1 hr before or 1 hr after food with full glass of water
- Presence of food containing low or high fats alters significantly the bioavailability of lapatinib3-5 folds relative to fasting
- Avoid grapefruit/juice may ↑ its plasma level
- Pregnancy risk factor:D

### **Adverse Drug Effects:**

Cardiotoxicity(discontinue if Qt prolongation), Hepatotoxicity (consider dose reduction for moderate enzyme elevation or discontinuation if severe hepatotoxicity develops Pulmonary toxicities(dyspnea-pneumonitis), Skin rash and pruitis Gastro Intestinal toxicity(diarrhea)

#### REFERRENCE:



# MEDICATION CASODEX (BICALUTAMIDE)



# **DOSE/FDA INDICATION**

Metastatic prostate cancer in combination with LHRH agonist
 50 mg Per oral daily

#### MONITORING PARAMETERS

**Black Box Warning:NONE** 

Baseline& Periodically: Liver Functions Tests (discontinue if ALT, 2xUpper Limit Normal or patient develops jaundice

**Drug Drug Interactions:** 

CYP3A4 inhibitors Warfarin: may ↑bleeding Ketoconazole:may ↑plasma conc of bicalutamide Drug disease interaction: Diabetus:loss of glycemic control Cardiac disease: may cause fluid retention

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

May take with or with out food

- Usually in combination with LHRH agonist
- Hazardous agent, use precautions when handling
- Contain lactose, use should be carefully considered in pts with galactose intolerence or malabsorbtion
- Contra Indication in females
- Pregnancy risk factor:X

#### **Side Effects**

Endocrine (gynecomastia, hot flashes, breast tenderness, Gastro Intestinal toxicity (diarrhea-constipation)

#### REFERRENCE:



# MEDICATION IBRANCE (PALBOCICLIB)



# **DOSE/FDA INDICATION**

 Advanced or metastatic breast cancer with HR+/HER- post menopausal women for disease progression following endocrine therapy 125 mg Per oral daily for 21 days and one week

#### **MONITORING PARAMETERS**

Black Box Warning:NONE
Baseline &Periodically: CBC
Drug Drug Interactions:
CYP3A4 substrate

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Swallow cap whole

- Take with food at same time every day
- Avoid grape fruit/juice
- · If missed dose or vomiting occurs do not take replacement dose
- Pregnancy risk factor:D

### **Advers Drug Effects**

Myelosuppression,stomatitis,peripheral neuropathy,alopecia, Nause/Vomiting

#### REFERRENCE:



# MEDICATION

# **NEXAVAR (SORATINIB)**

# **DOSE/FDA INDICATION**



Unresectable hepato cellular carcinoma, Advanced renal cell carcinoma, Differentiated thyroid cancer: 400 mg Per oral BID

#### **MONITORING PARAMETERS**

**Black Box Warning:NONE** 

Baseline & Periodically :CBC,Electrolytes,Liver Functions Tests, Blood Pressure,Thyroid function, ECG if at risk for QT prolongation ↓dose if ADE(renal-hepatic dysfunction

Drug Drug Interactions: CYP3A4 substrate,CYP2C9 (doxo rubicin,irinotecan, docetaxel may ↑ their plasma level)

Rifambicin may ↓AUC of sorafenib Paclitaxel&carboplatin may↑sorafenib plasma level May ↑anti coagulant effect of warfarin

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Take on empty stomach 1 hr before or 2 hrs after food

- Avoid grape fruit/juice
- Hazardous agent, use precautions when handling
- Pregnancy risk factor:D
- Avoid pregnancy while on therapy and for at least 12 weeks after discontinuation of therapy

#### **Advers Drug Effects**

Cardiotoxicity(arrythmia-Hypertension-Myovardial Infarction)
Hypophosphatemia-hypocalcemia Myelosuppression,anemia, heomorrage
if developed discontue medicine, Pulmonary toxicity

#### REFERRENCE:



# **MEDICATION**

PURINETHOL (6-MERCAPTO PURINE)



# **DOSE/FDA INDICATION**

Acute lymphoid leukemia Various regimens exist Typical:
1.5-2.5 mg/kg Per Oral daily

#### **MONITORING PARAMETERS**

Black Box Warning:NONE Baseline&Perdiocally: CBC,Liver Function Tests&billirubin,serum uric acid Use with caution in hepatic impairment,may need dose modification Crcl<50 ml/min interval adjustment:every 48 hrs

**Drug Drug Interactions:** 

Allopurinol,Azathioprine: May ↑mercapto purine effect Warfarin: may↓ warfarin effect

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Take on empty stomach

- · Adminstration in the evening has demonstrated superior out comes
- Hazardous agent, use precautions when handling
- Do not take with milk or milk based products, there is an enzyme in cow milk can break down mercapto purine
- Pregnancy risk factor: D

### **Advers Drug Effects**

Hepatotoxicity(jaundice&hyperbillirubinemia)occur 1-2 months&can be dose limiting Myelosuppression,skin rashes,stomatitis, photosensitivity

#### REFERRENCE:



# MEDICATION REVLIMID (LENALIDOMIDE)



### DOSE/FDA INDICATION

• Multiple myeloma (with dexamethasone) 25 mg Per oral on day 1-21, then one week off

Myelo displastic syndrome 10 mg per Oral daily

#### **MONITORING PARAMETERS**

Black Box Warning: Embryo fetal risk toxicity,thrombo embolism Baseline& Periodically: CBC,Scr,Lver Functions Tests,Thrombosis,

Renal impairment, may need dose modification

Pre existing viral liver diseases or elevated liver enzymes →incraesed risk of hepatic failure,may need dose reduction or interruption

Drug Drug Interactions: Erythrocyte stimulating agent (epoteindarbepotein), estrogen containing agents: ↑risk of thrombosis

Digoxin: may †digoxin plasma conc

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

- Swallow cap whole with water
- Take on empty stomach 1 hr before or 1 hr after food
- Adminstration in the evening has demonstrated superior out comes
- Pregnancy risk factor:X
- Avoid pregnancy while on therapy, use 2 methods of contraceptives,negative pregnancy test must be obtained before initiation of ttt Men should use condom during therapy&at least 4 weeks after discontinuation of therapy

### **Advers Drug Effects**

Thrombo embolism(DVT-PE-MI) Thrombocytopenia-neutropenia Dizziness, tremors Diarrhea, constipation

#### REFERRENCE:



# MEDICATION JAKAFI (RUXOLITINIB)



# **DOSE/FDA INDICATION**

 High risk myelofibrosis 5-20 mg Per oral BID
 Polycythemia vera after hydroxy urea therapy 10 mg Per oral BID dose titrated based on Haemoglobin&Platelets

#### MONITORING PARAMETERS

#### **BBW:NONE**

Base line& Periodically: CBC,Renal,Liver Functions Tests Modify dose for thrombocytopenia,titrate dose based on safety &efficacy Skin lession Drug Drug Interactions: CYP3A4 substrate Modify dose with CYP3A4 strong inhibitor

#### **KEY COUNSELLINS POINTS**

#### **Administrationt**

Take with or with out food

- If patient has feeding tube:mix each tab with 40 ml of water,stir for 10 mins (give within 6 hrs of mixing)
- Avoid grape fruit/juice
- When d/c therapy,taper by 5 mg PO BID each week
- Pregnancy risk factor:C

#### **Advers Drug Effects**

Myelosuppression, dizziness, headache, weight gain

#### REFERRENCE

