



# **Pharmacy Information System (PhIS) and Clinic Pharmacy System (CPS)**

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**Pharmacy Based**

**User Manual  
Cytotoxic Drug Reconstitution (CDR)**

<b>Version</b>	<b>: 13<sup>th</sup> Edition</b>
<b>Document ID</b>	<b>: PB_U. MANUAL_CDR</b>



PhIS & CPS Project  
User Manual – Order Management - Cytotoxic Drug Reconstitution  
(CDR)



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Application reference: PhIS & CPS v2.6



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## 1.0 Introduction

### 1.1 Overview of PhIS

Pharmacy Information System or better known as PhIS, is a complete and comprehensive system that integrates pharmacy related services geared towards pharmacy excellence. PhIS implementation would transform most of current manual process to electronic system would benefit facility end user in the health care sector.

There are 12 modules to assist services delivery by the health care sector which comprises of:

1. Order Management
2. Inpatient Pharmacy
3. Outpatient Pharmacy
4. Medication Counselling
5. Ward Pharmacy
6. Pharmacy Inventory
7. Manufacturing of Cytotoxic Drug Reconstitution, Parenteral Nutrition, IV Admixture & Eye Drop, Radiopharmaceuticals and Extemporaneous
8. Adverse Drug Reaction & Drug Allergic (ADR & DAC)
9. Clinical Pharmacokinetics Services (TDM)
10. Drug Information & Consumer Education (DICE)
11. Medication Therapy Adherence Clinic (MTAC)
12. Data Mining (PhARM)

### 1.2 Purpose and Objectives

This user manual outlines the Cytotoxic Drug Reconstitution sub-module and its key features and functionalities. The primary objective is to help guide user through the process of completing PhIS application process.

User will understand the following activities in details:

- Cytotoxic Drug Reconstitution Order
- Cytotoxic Drug Reconstitution Verification
- Cytotoxic Drug Reconstitution Preparation
- Cytotoxic Drug Reconstitution Dispensing

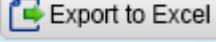
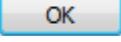
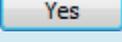
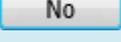
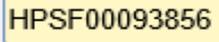
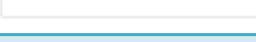
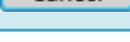
### 1.3 Organised Sections

These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Cytotoxic Drug Reconstitution
- Section 4 : Acronyms
- Section 5 : Links to Clinical Modules

## 2.0 Application Standard Features

### 2.1 PhIS Legend

Standard Legend			
	Login to PhIS		Logout from PhIS
	Close All Open Tabs		Refresh Screen
	Expand Menu		Collapse Menu
	Expand Module		Collapse Module
	Add/Create New Record		Save
	Close Window		Calendar Icon
	Save Transaction		Delete Record
	Export Report From PDF file to Excel file		OK Button
	Yes Button		No Button
	Radio Button	<input type="checkbox"/>	Checkbox
	System Automatic Generate Record No.		Automatically Display/Retrieve Box
	Reset Login Screen		Show Help
	Display Home Tab		Search Record
	Cancel		Dropdown Box
	Search Icon	*	Mandatory Field
	Edit Record		Empty Text Box
	Cancel Button		



Cytotoxic Drug Reconstitution (CDR) Module Legend			
	Update Patient's Height and Weight	<a href="#">Regimen Details</a>	Display Regimen Details
	Update Sampling Details		Confirm Order
<a href="#">AUC Calculator</a>	AUC Calculator		Save Record
<a href="#">Basic Search</a>	Basic Search	<a href="#">Advanced Search</a>	Advanced Search
	Display CDR Order Screen		Authorize Order
	Endorse Order		

**Note**

To learn more about Login Information, kindly click [Login Information](#) module for descriptive steps.

### 3.0 Cytotoxic Drug Reconstitution (CDR)

#### Overview

The Order Management – Cytotoxic Drug Reconstitution (CDR) module handles all the information to specify the items as per local drug formulary, MOH and non-MOH including registered and non-registered drugs. This function is to enable data mining. All medication orders must be prescribed by authorized personnel only and in compliance with guidelines on prescribing in the drug formulary (drug category, discipline / specialty) as defined by MOH.

#### User Group

This module is intended for Specialist, Doctor, Medical Officer and Medical Assistant.

#### Functional Diagram

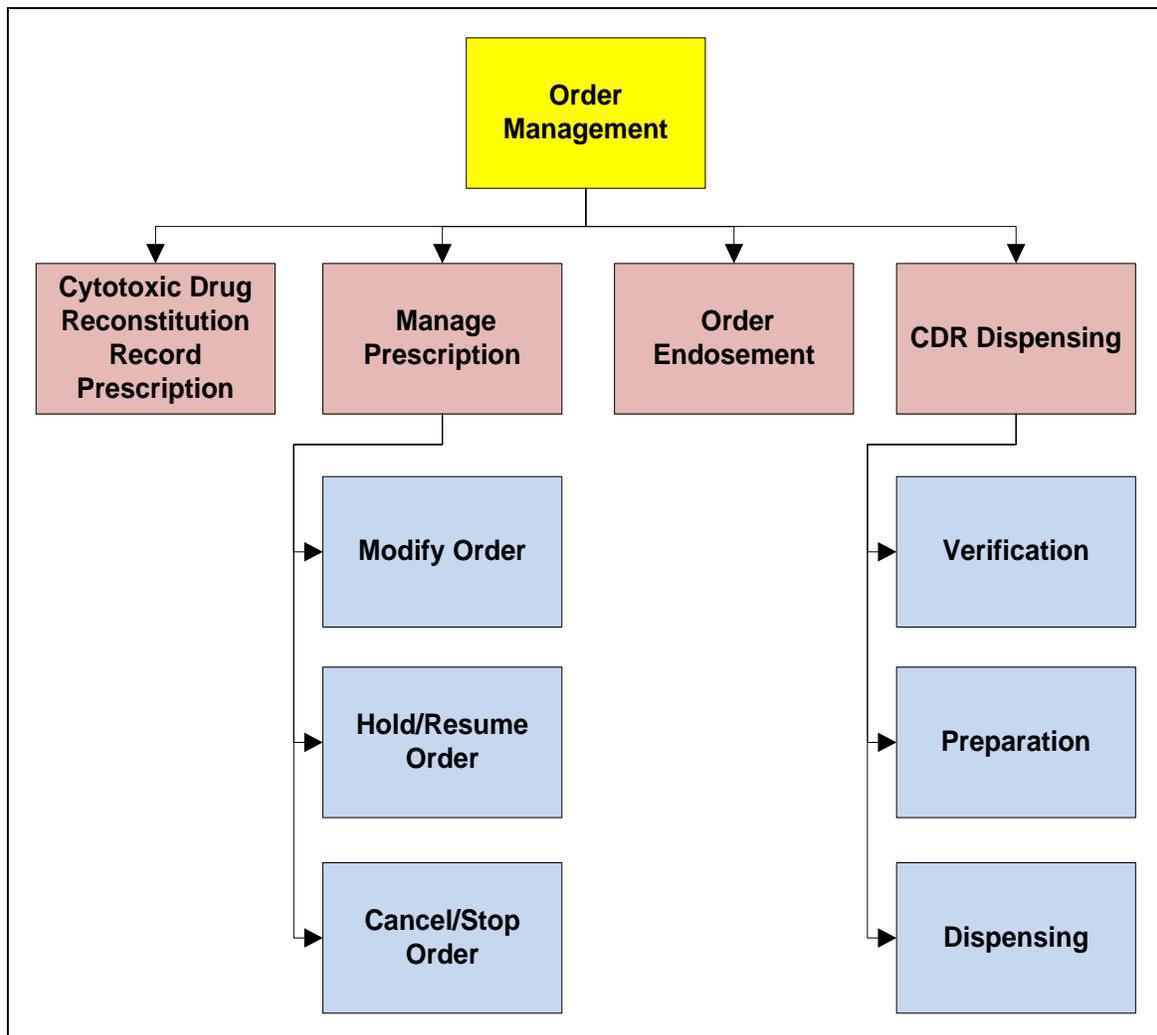


Figure 3.0



## Functional Description

Cytotoxic Drug Reconstitution (CDR) comprises of three (3) main functions:

- **Cytotoxic Drug Reconstitution (CDR) Order**  
To allow pharmacist to record prescription
- **Manage Prescription**  
To monitor patient's prescription by modifying order, hold/resume order, cancel/stop order.
- **Order Endorsement**  
Order endorsement is to notify pharmacist on prescription changes made by others pharmacist.

### 3.1 Cytotoxic Drug Reconstitution Order

CDR Order allows Prescriber to place CDR order. Order will be sent to Pharmacist for process of verification, preparation and dispensing.

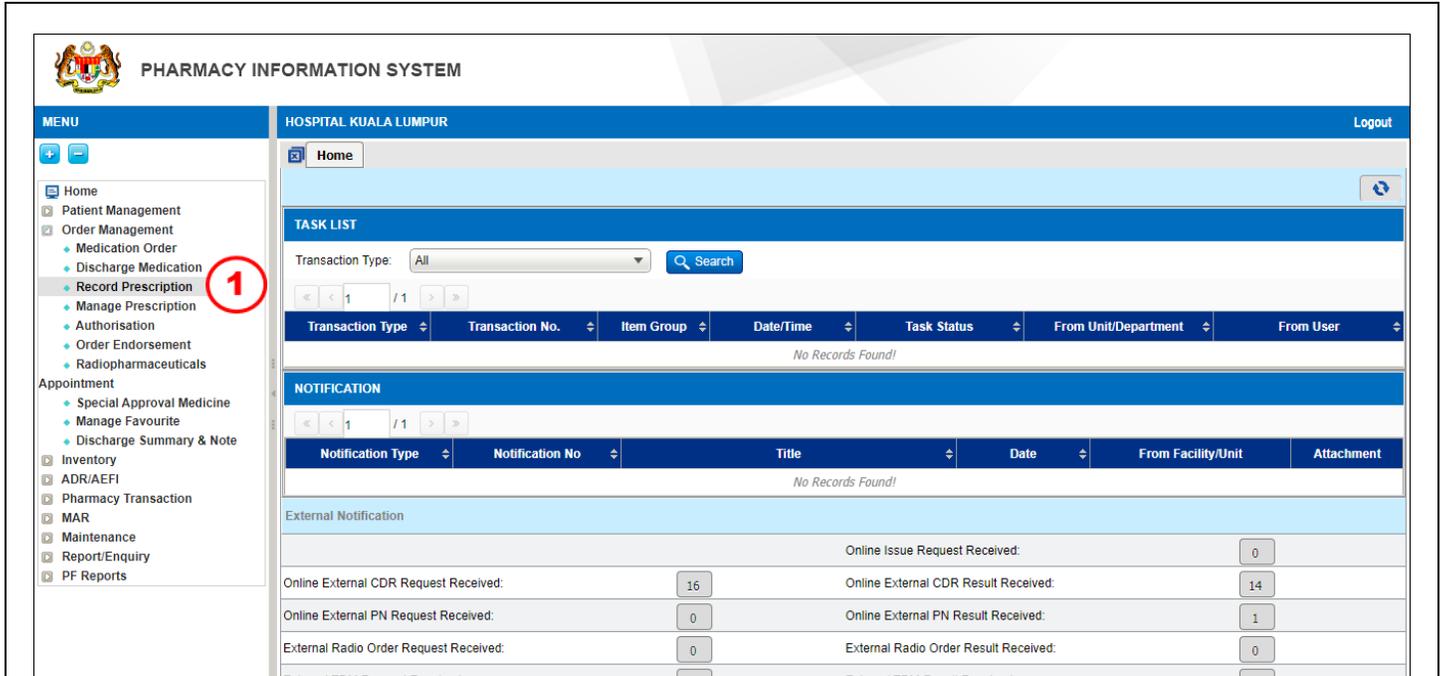


Figure 3.1-1 PhIS Home Page

This page is used to search for a registered patient

#### STEP 1

Click on 'Order Management' menu followed by 'Record Prescription' and screen will be displayed as per Figure 3.1-1



Figure 3.1-2 Medication Order

#### STEP 2

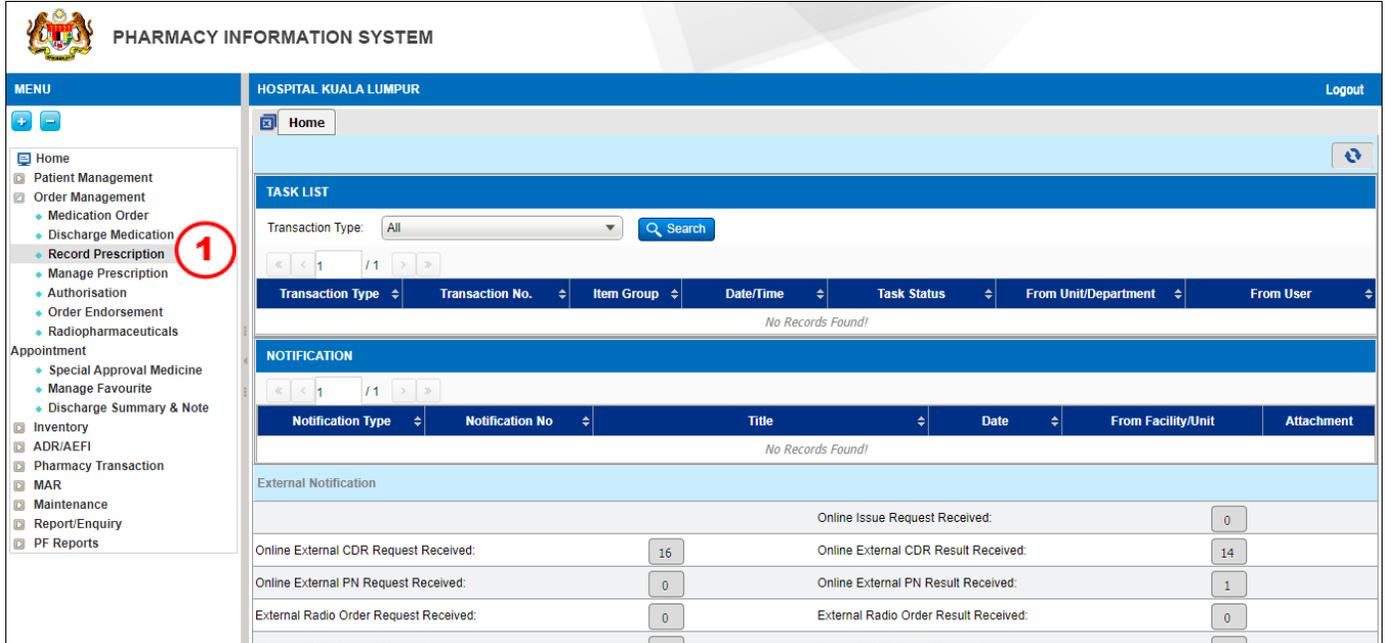
Click on the  button to search for a registered patient

#### Note

If the patient is not registered, click on the  button and the Patient Registration screen will be displayed

### 3.2 New Patient Registration

To register a new patient, please perform the steps below.



Notification Type	Notification No	Title	Date	From Facility/Unit	Attachment
No Records Found!					
External Notification					
Online Issue Request Received:				0	
Online External CDR Request Received:	16	Online External CDR Result Received:	14		
Online External PN Request Received:	0	Online External PN Result Received:	1		
External Radio Order Request Received:	0	External Radio Order Result Received:	0		

Figure 3.2-1 PhIS Home Page

This page is used to register new patient

#### STEP 1

Click on 'Order Management' menu followed by 'Record Prescription' and Medication Order screen will be displayed as per Figure 3.2-2

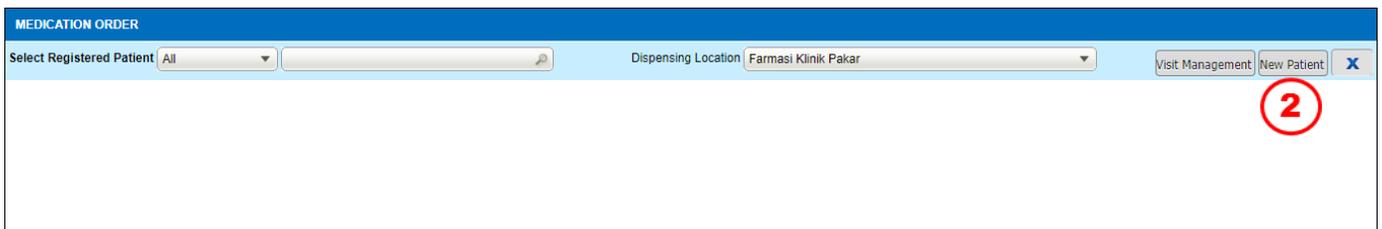


Figure 3.2-2 Medication Order

#### STEP 2

Click on the  button to register for new patient

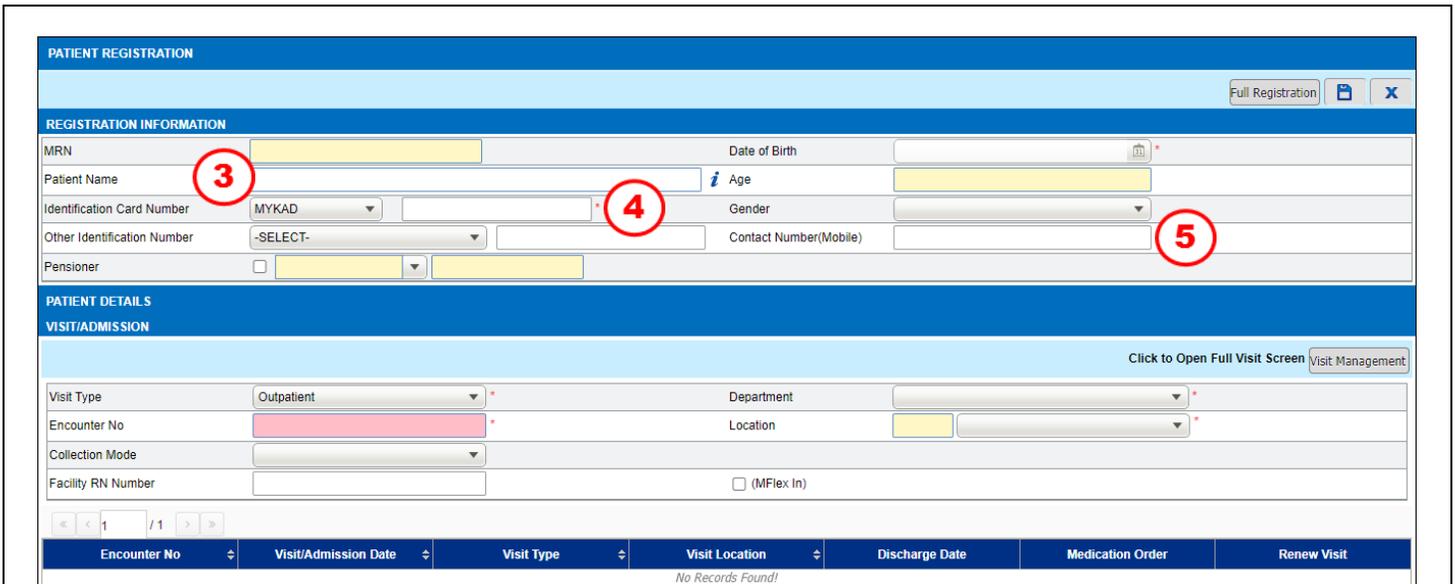


Figure 3.2-3 Registration Information

**STEP 3**

Enter **Patient Name**

**STEP 4**

Select from **Identification Card Number** drop down box:

- MYKAD
- MYKID

and enter the relevant number

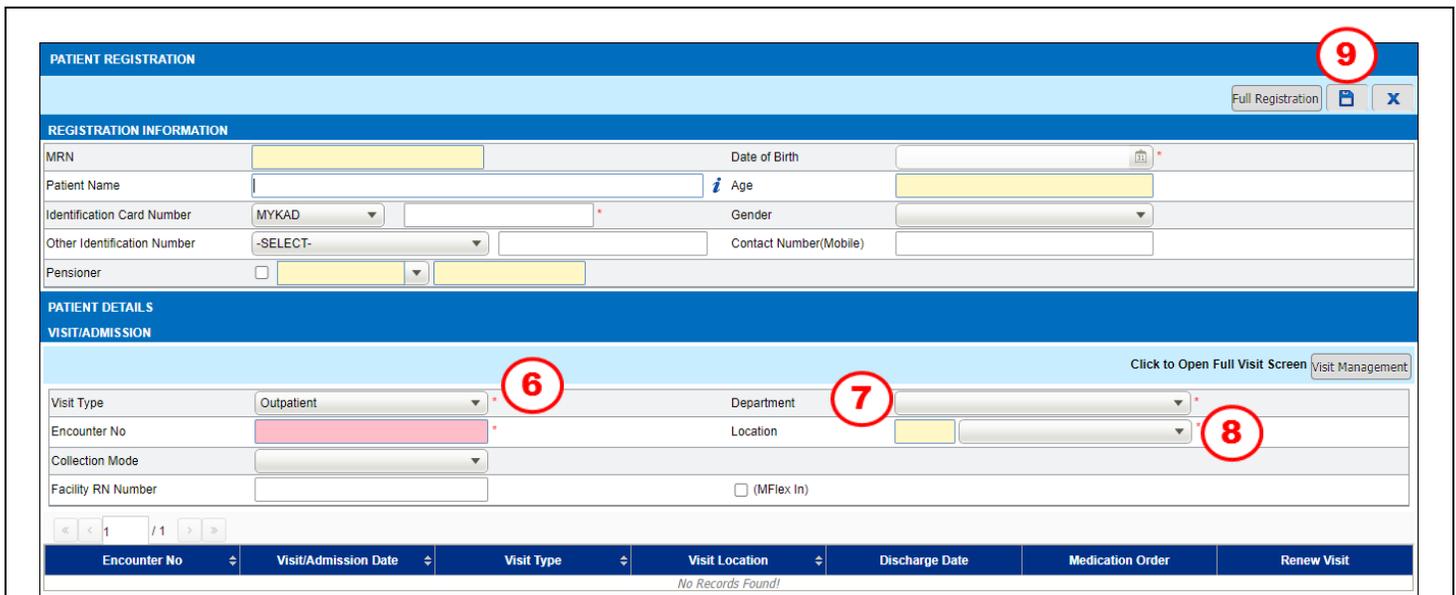
**Note**

- After enter the **Identification Card Number** the below details will be displayed:
  - Date of Birth (dd/mm/yy)
  - Age (42 Y 05M 21D)
  - Gender (Male/Female)
- If MYKAD/MYKID is unavailable, user is required to select the **Other Identification Number** dropdown box:
  - Birthday Certificate
  - Driving License
  - Father IC
  - Military Card Number
  - Mother IC
  - MYKAS
  - MYPR
  - Old IC
  - Others
  - Passport
  - Pension Card
  - Police Card Number
  - UNHCR
  - Unknown Patient
  - Work Permit

and enter the relevant number.

**STEP 5**

Enter **Contact Number (Mobile)**



**PATIENT REGISTRATION** Full Registration  

**REGISTRATION INFORMATION**

MRN  Date of Birth  \*

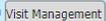
Patient Name  Age

Identification Card Number MYKAD  \* Gender

Other Identification Number  -SELECT-  Contact Number(Mobile)

Pensioner

**PATIENT DETAILS**

**VISIT/ADMISSION** Click to Open Full Visit Screen 

Visit Type  Outpatient \*  Department  \*

Encounter No  \*  Location  \*

Collection Mode

Facility RN Number   (MFlex In)

1 / 1

Encounter No	Visit/Admission Date	Visit Type	Visit Location	Discharge Date	Medication Order	Renew Visit
No Records Found!						

Figure 3.2-4 Visit/Admission

**STEP 6**

Select the **Visit Type** from dropdown box:

- Daycare
- Emergency
- Inpatient
- Outpatient
- Outsource
- SPUB
- Walk-in

**STEP 7**

Select the **Department** from dropdown box:

**Note**

**Department** will tie to the selected visit type.

**STEP 8**

Select **Location** from dropdown box

**Note**

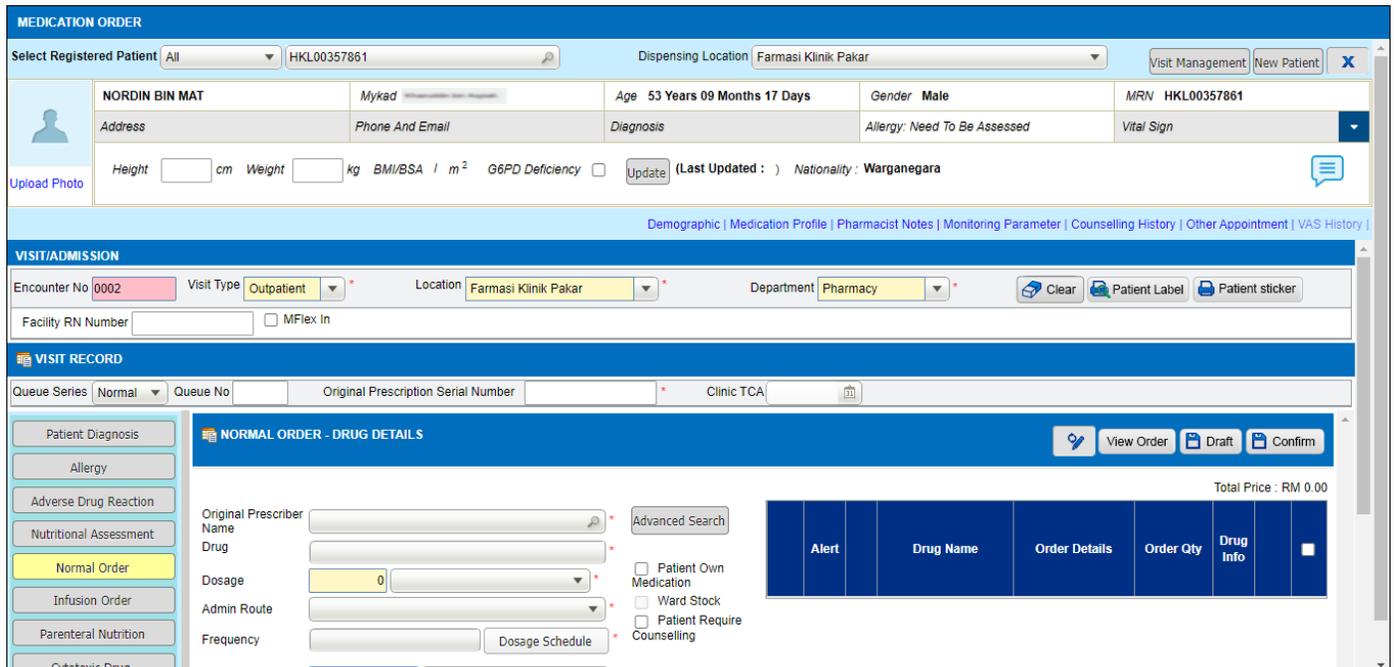
**Location** will tie to the selected Department.

**STEP 9**

Click on the  button to save the record and medication order screen will display as per Figure 3.2.5

**Note**

- After click the save button, system will automatically generate the **MRN** (Medical Record Number)
- Another option to register a new patient is to click on the **New Patient Registration** button located under Patient Quick Registration that will display the same screen as Figure 3.2-3.



The screenshot displays the 'MEDICATION ORDER' interface. At the top, it shows the patient's name 'NORDIN BIN MAT', MyKad 'HKL00357861', and dispensing location 'Farmasi Klinik Pakar'. Below this, there are fields for patient demographics: Age (53 Years 09 Months 17 Days), Gender (Male), and MRN (HKL00357861). A 'New Patient Registration' button is visible in the top right corner. The 'VISIT/ADMISSION' section includes fields for Encounter No (0002), Visit Type (Outpatient), Location (Farmasi Klinik Pakar), and Department (Pharmacy). The 'VISIT RECORD' section shows Queue Series (Normal) and Queue No. The 'NORMAL ORDER - DRUG DETAILS' section contains fields for Original Prescriber Name, Drug, Dosage (0), Admin Route, and Frequency. There are also checkboxes for 'Patient Own Medication', 'Ward Stock', and 'Patient Require Counselling'. A table with columns 'Alert', 'Drug Name', 'Order Details', 'Order Qty', and 'Drug Info' is present, along with a 'Total Price : RM 0.00' indicator.

**Figure 3.2-5 Medication Order**

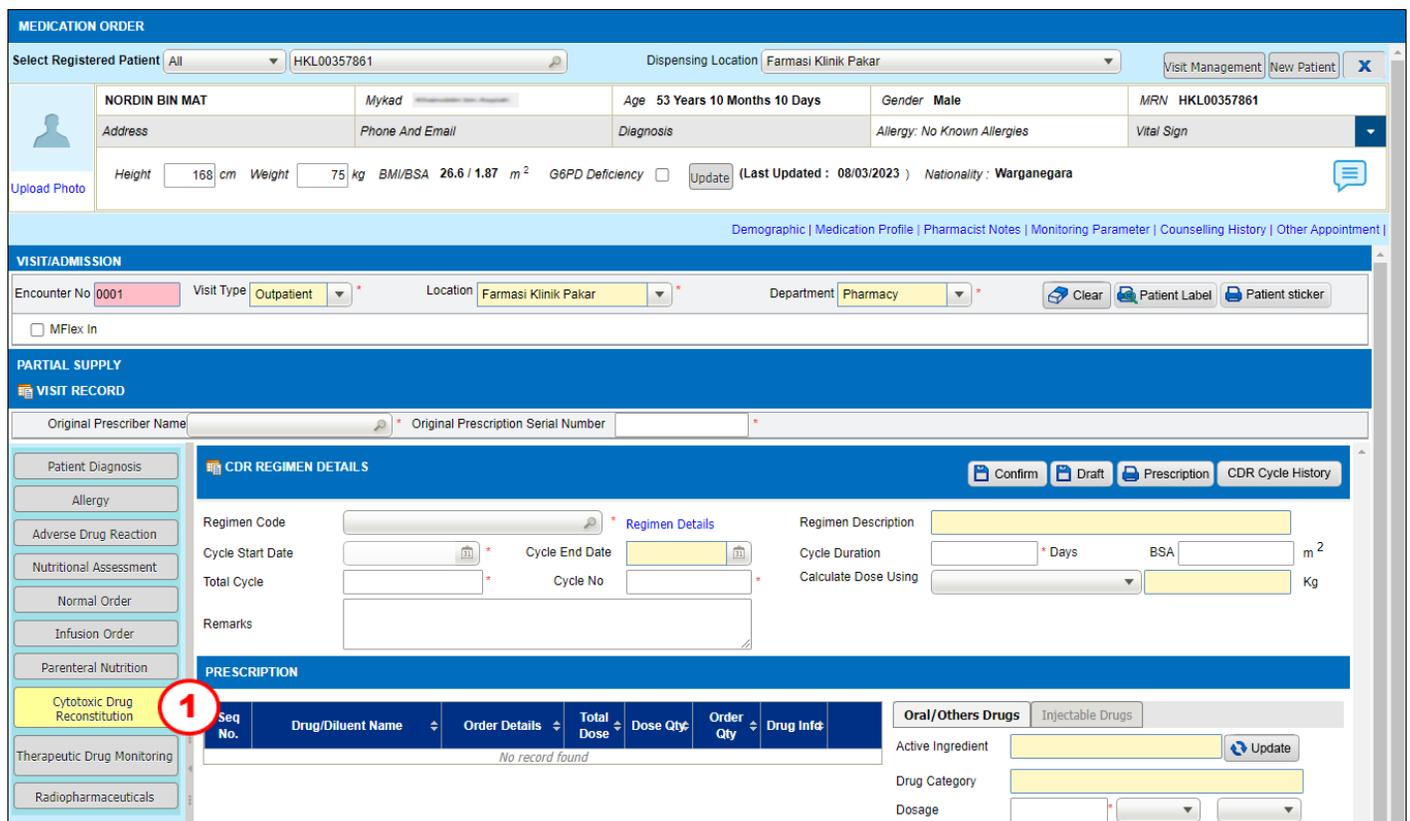
**4.0 Cytotoxic Drug Reconstitution (CDR) Order, Verify and Prepare**

Perform these steps below to create new order, verify and prepare for CDR.

Cytotoxic Drug is a drug that has toxic on cells, commonly used in chemotherapy to inhibit the proliferation of cancerous cells. CDR Drug ordered as regimen through CDR Order module by prescriber.

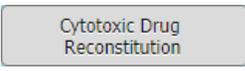
Regimen is a group of CDR drugs. Each drug within a regimen is indicated to be taken on which day/time within the cycle duration. CDR regimen will be set by HQ in Regimen Master setup CDR Regimen Category master setup also, will be done by HQ.

**CDR Order:**



**Figure 4.0-1 CDR Order**

**STEP 1**

Click on the  to display CDR Order screen

**Note**

- CDR Order screen consists of:
  - Patient's Banner
  - Visit / Admission
  - Visit Record
  - CDR Regimen Details
  - Prescription

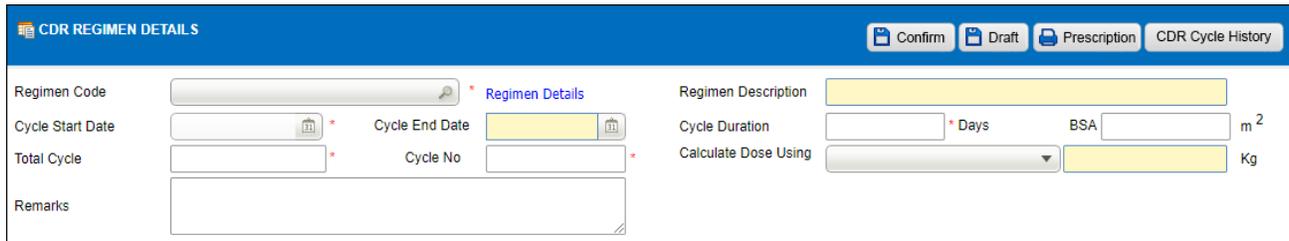


Figure 4.0-2 CDR Regimen Details

#### Patient's Banner

- Patient's Banner will be displayed patient's profile. User can update patient's height and weight.
- Click on the  button and system will be automatically calculated the BMI/BSA in m<sup>2</sup>.

#### Visit Admission

- Visit Admission will be displayed Encounter No., Visit Type, Location and Department; Breast Feeding and Pregnant check box.

#### Visit Record

- Visit Record will be displayed Original Prescriber Name and Original Prescription Serial Number fields.
- Enter details for both fields.

#### CDR Regimen Details

- CDR Regimen Details consists of:
  - Regimen Code
  - Regimen Description
  - Regimen Details Hyperlink
  - Cycle Start Date
  - Cycle End Date
  - Cycle Duration
  - BSA
  - Total Cycle
  - Cycle No
  - Calculate Dose Using
  - Remarks

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
No record found						

**Oral/Others Drugs**

Active Ingredient  Update

Drug Category

Dosage

Total Dose   AUC Calculator

Admin Route

Frequency

Chemo Day

Drug Indication

Drug Remarks

**Injectable Drugs**

Active Ingredient  Update

Dosage

Total Dose   AUC Calculator

Admin Route

Frequency

Chemo Day

Drug Indication

Infuse Over  (Hour) :  (Minute)

Diluent

Diluent Volume

Total Volume

Infusion Rate

Remarks

**Figure 4.0-3 Prescription – Oral/Others Drugs**

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
No record found						

**Oral/Others Drugs**

Active Ingredient  Update

Dosage

Total Dose   AUC Calculator

Admin Route

Frequency

Chemo Day

Drug Indication

Infuse Over  (Hour) :  (Minute)

Diluent

Diluent Volume

Total Volume

Infusion Rate

Remarks

**Injectable Drugs**

Active Ingredient  Update

Dosage

Total Dose   AUC Calculator

Admin Route

Frequency

Chemo Day

Drug Indication

Infuse Over  (Hour) :  (Minute)

Diluent

Diluent Volume

Total Volume

Infusion Rate

Remarks

**Figure 4.0-4 Prescription – Injectable Drugs**

**Prescriptions**

- Prescriptions consists of:
  - Oral/Others Drugs
  - Injectable Drugs
  - Drug/Diluents' Name
  - Order Details
  - Total Dose
  - Dose Qty (Quantity)
  - Order Qty (Quantity)
  - Drug Info (Information)
  - Seq No

**MEDICATION ORDER**

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

**NORDIN BIN MAT** | Mykad: [Redacted] | Age: 53 Years 10 Months 10 Days | Gender: Male | MRN: HKL00357861

Address: [Redacted] | Phone And Email: [Redacted] | Diagnosis: [Redacted] | Allergy: No Known Allergies | Vital Sign: [Redacted]

Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m<sup>2</sup> | G6PD Deficiency:  | Update (Last Updated: 08/03/2023) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

**VISIT/ADMISSION**

Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

MFlex In

**PARTIAL SUPPLY**

**VISIT RECORD**

Original Prescriber Name: [Redacted] **2** | Original Prescription Serial Number: [Redacted]

**CDR REGIMEN DETAILS** | Confirm | Draft | Prescription | CDR Cycle History

Regimen Code: [Redacted] | Regimen Description: [Redacted]

Cycle Start Date: [Redacted] | Cycle End Date: [Redacted] | Cycle Duration: [Redacted] Days | BSA: [Redacted] m<sup>2</sup>

Total Cycle: [Redacted] | Cycle No: [Redacted] | Calculate Dose Using: [Redacted] Kg

Remarks: [Redacted]

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
No record found						

Active Ingredient: [Redacted] | Update

Drug Category: [Redacted]

Dosage: [Redacted]

Figure 4.0-5 Prescription – Medication Order

**STEP 2**

Click on the button to search **Original Prescriber Name** as per Figure 4.0-6

**Search** | X

<< < 1 / 284 > >> [ 1 - 10 / 2837 ]

Prescriber Name	Department/Discipline
[Redacted]	Nuclear Medicine
[Redacted]	Nuclear Medicine
[Redacted]	Orthopaedic <b>3</b>
[Redacted]	General Medicine
[Redacted]	Radiology
[Redacted]	General Medicine
[Redacted]	General Medicine
[Redacted]	Orthopaedic
[Redacted]	Breast And Endocrine Surgery
[Redacted]	Histopathology (Anatomical Pathology)

Figure 4.0-6 Prescriber

**STEP 3**

Double click on the prescriber's name

**MEDICATION ORDER**

**NORDIN BIN MAT** Mykad  Age 53 Years 10 Months 10 Days Gender Male MRN HKL00357861

Address  Phone And Email  Diagnosis  Allergy: No Known Allergies Vital Sign

Height 168 cm Weight 75 kg BMI/BSA 26.6 / 1.87 m<sup>2</sup> G6PD Deficiency  Update (Last Updated : 08/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

**VISIT/ADMISSION**

Encounter No 0001 Visit Type Outpatient Location Farmasi Klinik Pakar Department Pharmacy Clear Patient Label Patient sticker

MFlex In

**PARTIAL SUPPLY**

**VISIT RECORD**

Original Prescriber Name  \* Original Prescription Serial Number A2115 \*

Figure 4.0-7 Medication Order

**STEP 4**

Enter **Original Prescription Serial Number**

**CDR REGIMEN DETAILS** Confirm Draft Prescription CDR Cycle History

Regimen Code CDRON00008 \* Regimen Details Regimen Description Cisplatin 40mg/m2 Weekly

Cycle Start Date 08/03/2023 \* Cycle End Date 14/03/2023 \* Cycle Duration 7 \* Days BSA 1.87 m<sup>2</sup>

Total Cycle 6 \* Cycle No  \* Calculate Dose Using Actual Body Weight 75 Kg

Remarks

Figure 4.0-8 Medication Order

**STEP 5**

Click on the **Regimen Code** button and Regimen Search window will display as shown in Figure 4.0-9

Search Regimen

Active Ingredient

Regimen Category  Regimen Type

Regimen Description  Regimen Code

<< 1 / 46 >> [ 1 - 10 / 458 ]

Regimen Code	Regimen Description	Regimen Type	Regimen Category
CDRON00095	Cisplatin + Methotrexate(MTX)	-	Oncology
CDRON00003	Cisplatin 100mg/m2, 3-weekly	-	Oncology
CDRON00004	Cisplatin 100mg/m2 + Docetaxel 75mg/m2 + 5FU 1g/m2, 4days	-	Oncology
CDRON00005	Methotrexate(MTX) 40mg/m2, weekly	-	Oncology
CDRON00006	Carboplatin + 5FU + FA	-	Oncology
CDRON00008	Cisplatin 40mg/m2 Weekly	-	Oncology
CDRON00001	Carboplatin + 5FU 600mg/m2, 4days	-	Oncology
CDRON00009	Carboplatin, weekly	-	Oncology
CDRON00002	Cisplatin 75mg/m2 + 5FU 750mg/m2, 5days	-	Oncology
CDRON00007	EP (IV Etoposide 100mg/m2 + Cisplatin 75mg/m2)	-	Oncology

Figure 4.0-9 Search Regimen

**Note**

- Double click on the selected **Regimen Code**
- **No. Of Cycle** is number of times the regimen suggested to be taken.
- **Cycle Duration** is a time indication of a regimen. Within cycle duration of a regimen, no other regimen should be started.
- **Cycle Start Date and Cycle End Date:** System will be automatically calculated cycle end date based on cycle start date and cycle duration.
- User is allowed to select **Calculate Dose Using** from dropdown box:
  - Actual Body Weight
  - Adjusted Body Weight
  - Ideal Body Weight
- System will be automatically calculated the weight (kg) and BSA according to **Calculate Dosage Using** selected. It will give effect on **Total Dose** if user selects Dosage by per kg or by m2.
- Click on the [Regimen Details](#) hyperlink to display regimen details as per Figure 4.0-10.

REGIMEN DETAILS										
Category	Oncology --	Regimen Code	CDRON00008	Regimen Description	Cisplatin 40mg/m2 Weekly					
Cycle Duration	7	Remarks								
Active Ingredient	Admin Route	Dosage	Frequency	Chemo day	Infuse Over	Diluent	Diluent Volume	Drug Remark	Status	
Cisplatin	IV Infusion	40 mg/m2	OD (once daily)	1	1 Hours 0 Minutes	Sodium Chloride 0.9% 500mL IV soln	500 ml	40-50 mg/m2	Active	

Figure 4.0-10 Regimen Details

- System will be displayed prescriptions based on regimen code selected in CDR Regimen Details as shown in Figure 4.0-11

PRESCRIPTION						
Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
	Cisplatin 50mg/50ml Injection	40 mg/m2, OD (once daily), Day: 1	74.8 mg	74.8 ml	2 vial	 
	Sodium Chloride 0.9% 500mL IV soln	Schedule		425.2 ml	1 bott	

Oral/Others Drugs | **Injectable Drugs**

Active Ingredient:  Update

Dosage:  \*  Update

Total Dose:  \*  AUC Calculator

Admin Route:

Frequency:

Chemo Day:

Drug Indication:

Infuse Over:  (Hour) :  (Minute)

Diluent:

Diluent Volume:

Total Volume:

Infusion Rate:

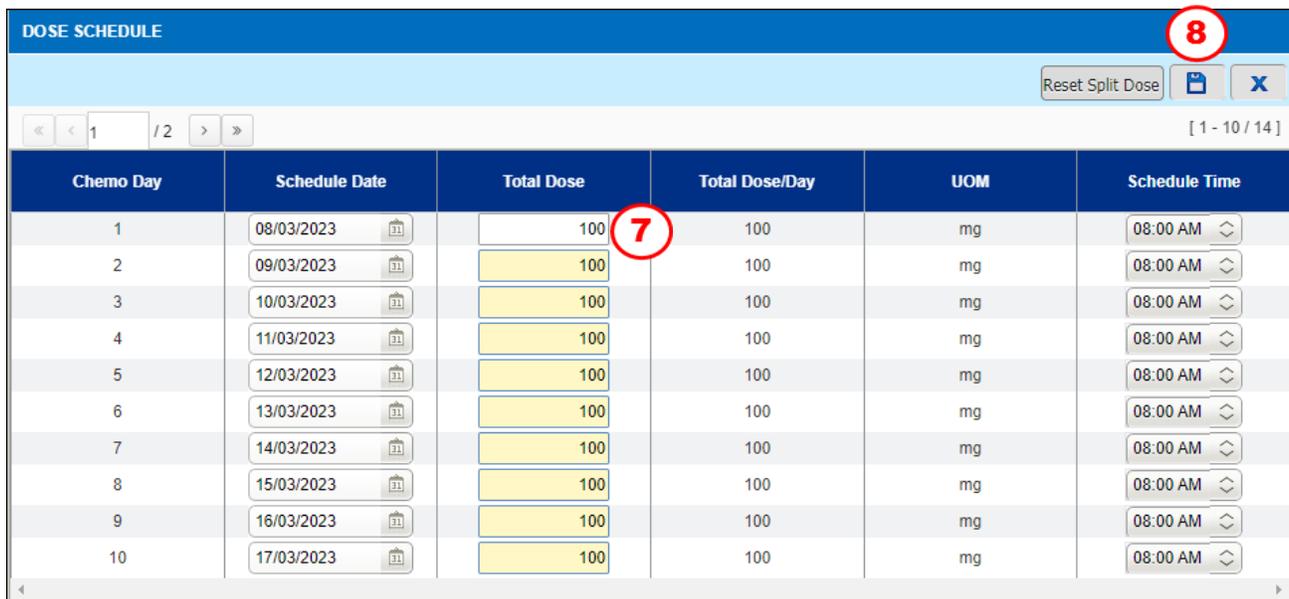
Remarks:

Figure 4.0-11 CDR Prescription

- To delete not related drugs for that prescription, click on  button. System will be deleted selected drug and that drug will not be flow for dispensing.
- If select **Dosage** milligram or milliliter and 'kg' or '/m2' from dropdown menu, **Total Dose** will be displayed based on Calculate Dose Using selected previously in CDR Regimen Details.

### STEP 6

Click on the Schedule hyperlink and Dose Schedule windows will be display as Figure 4.0-12



Chemo Day	Schedule Date	Total Dose	Total Dose/Day	UOM	Schedule Time
1	08/03/2023	100	100	mg	08:00 AM
2	09/03/2023	100	100	mg	08:00 AM
3	10/03/2023	100	100	mg	08:00 AM
4	11/03/2023	100	100	mg	08:00 AM
5	12/03/2023	100	100	mg	08:00 AM
6	13/03/2023	100	100	mg	08:00 AM
7	14/03/2023	100	100	mg	08:00 AM
8	15/03/2023	100	100	mg	08:00 AM
9	16/03/2023	100	100	mg	08:00 AM
10	17/03/2023	100	100	mg	08:00 AM

Figure 4.0-12 Dose Schedule

### Note

- User is allowed to modify **Schedule Time**
- User is allowed to do a Split Dose function and it is applicable only for CDR Normal Drug only and not applicable for Inject able/Infusion Drugs.

### STEP 7

Enter **Total Dose**

### Note

- User is allowed to enter **Total Dose** for the first Chemo Day only and the subsequent Chemo Day will follow the first day
- **Total Dose/Day** will automatically calculate based on the sum entered value in **Total Dose** for each of Admin Time

### STEP 8

Click on the  button to save the record

PRESCRIPTION						
Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
	Cisplatin 50mg/50ml Injection	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 <b>Schedule</b>	200 mg	200 ml	4 vial	 
	Sodium Chloride 0.9% 500mL IV soln			800 ml	2 bott	

Oral/Others Drugs	Injectable Drugs
Active Ingredient	Cisplatin 
Dosage	100 * mg /m <sup>2</sup>
Total Dose	200 * mg 
Admin Route	IV Infusion
Frequency	OD (once daily)
Chemo Day	1
Drug Indication	
Infuse Over	2 (Hour) : 0 (Minute)
Diluent	Sodium Chloride 0.9% 500mL IV soln
Diluent Volume	800 ml
Total Volume	1000 ml
Infusion Rate	8.33 ml/Min
Remarks	

Figure 4.0-13 CDR Prescription

**Note**

- **Total Dose** will display a row highlighted with yellow color based on the split dose value and admin time of the first chemo day
- **Dose Qty** will be displayed based on the Total Dose/Day
- **Order Qty** will be automatically recalculate based on the Total Dose/Day

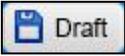
CDR REGIMEN DETAILS			
Regimen Code	CDRON00003	Regimen Description	Cisplatin 100mg/m <sup>2</sup> , 3-weekly
Cycle Start Date	08/03/2023	Cycle End Date	28/03/2023
Total Cycle	6	Cycle No	1
Remarks			
Cycle Duration	21 * Days	BSA	2 m <sup>2</sup>
Calculate Dose Using	Actual Body Weight		80 Kg

Figure 4.0-14 CDR Regimen Details

**STEP 9**

Enter **Cycle No**

**STEP 10**

Click on the  button to save the record as "Draft"

**Note**

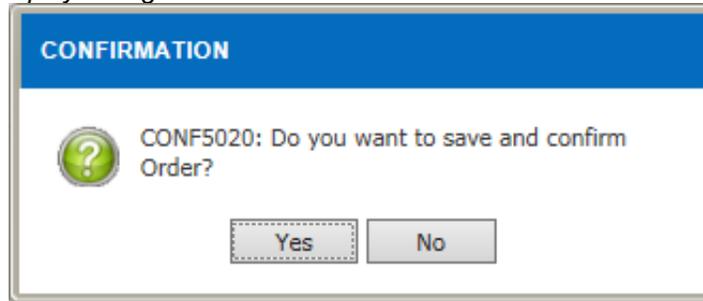
User still able to edit or modify order using this screen.

**STEP 11**

Click on the  button to confirm CDR order

**Note**

- Confirmation dialog will be display as Figure 4.0-15



**Figure 4.0-15 Confirmation Message**

- Click on the  button to confirm order and CDR Verification screen will be displayed as per Figure 4.0-17

**Note**

Click on the  button to print CDR Prescription

**Ministry of Health, Malaysia**  
**Hospital Seri Manjung**  
**Cytotoxic Drug Reconstitution**

Patient Name : ██████████	Patient ID : ██████████
Age : 23 Y 2 M 7 D	MRN : HSM00241776
Gender : Male	Prescription # : CDR0001124519
Height/Weight/BSA : 180 cm / 80 kg / 2.0 m <sup>2</sup>	Order Date/Time : 08/03/2023 12:50 PM
Allergy :	Location : Pharmacy Oncology Service

<b>Diagnosis</b> :	
<b>Regimen Code</b> :	CDRON00003
<b>Regimen Description</b> :	Cisplatin 100mg/m2, 3-weekly
<b>Cycle Start Date</b> :	08/03/2023
<b>Cycle Duration</b> :	21 Days
<b>Total Cycle</b> :	6
<b>Current Cycle</b> :	1

Route	Drug Name	Dosage	Total Dose	Diluent	Diluent Vol	Frequency	Chemo Day
INF	Cisplatin	100 mg/m2	200 mg	Sodium Chloride 0.9% 500mL IV soln	800 ml	OD (once daily)	1

<b>Prescribed By</b> :	██
<b>Designation</b> :	Pegawai Perubatan Pakar
<b>Department</b> :	Obstetrics and Gynaecology

**Figure 4.0-16 CDR Prescription Order**



**DRUG INFORMATION**

**Generic**

**methotrexate 50mg per 2mL Injection**

Contents	Methotrexate
Dosage	<p><i>Intramuscular</i> <b>Choriocarcinoma</b> Adult: 15-30 mg daily for 5 days. Repeat after at least 1 wk for 3-5 courses. Alternatively, 0.25-1 mg/kg (max: 60 mg) every 48 hr for 4 doses followed by folinic acid rescue, repeat at intervals of 7 days for 4 or more courses.</p> <p><i>Intramuscular</i> <b>Mycosis fungoides</b> Adult: 50 mg wkly as a single dose or 2 divided doses.</p> <p><i>Intramuscular</i> <b>Acute lymphoblastic leukaemia</b> Adult: Maintenance: 15 mg/m<sup>2</sup> once or twice wkly, with other agents.</p> <p><i>Intramuscular</i> <b>Crohn's disease</b> Adult: 25 mg once wkly for 16 wk. Maintenance: 15 mg wkly.</p> <p><i>Intrathecal</i> <b>Meningeal leukaemia</b> Adult: 12 mg/m<sup>2</sup> (max 15 mg) once wkly for 2-3 wk, then once mthly. Alternatively, 200-500 mcg/kg every 2-5 day until CSF cell count is normalised. Child: &lt;1 yr: 6 mg, 1 yr: 8 mg, 2 yr: 10 mg, &gt;3 yr: 12 mg. Patients &lt;3 yr should be treated in accordance with combination chemotherapy protocols. Admin is at wkly intervals and repeated until the CSF cell count is normal.</p> <p><i>Intravenous</i> <b>Osteosarcoma</b> Adult: Initial recommended dose: 12 g/m<sup>2</sup> as a 4-hr infusion, followed by folinic acid, as part of combined therapy. May increase dose to 15 g/m<sup>2</sup> in subsequent treatments if initial dosage is insufficient to achieve peak serum methotrexate levels of 454 mcg/mL at the end of the infusion. Methotrexate infusion is administered on postoperative wk 4, 5, 6, 7, 11, 12, 15, 16, 29, 30, 44 and 45; in combination with other chemotherapy agents. Folinic acid can be given orally, IM or IV inj starting 24 hr after the beginning of the methotrexate infusion. Give via parenteral routes if patient experiences GI toxicity (e.g. nausea, vomiting). Usual dosage of folinic acid: 15 mg every 6 hr for a</p>

Figure 4.0-19 Drug Information

**CDR VERIFICATION**

**Prescription**

	Age 23 Years 02 Months 07 Days	Gender Male	MRN HSM00241776
Address	Phone And Email	Diagnosis	Allergy: No Known Allergies
Height 180 cm	Weight 80 kg	BMI/BSA 24.7 / 2 m <sup>2</sup>	(Last Updated : 08/03/2023 ) Nationality : Warganegara

**PRESCRIPTION**

Encounter No:	0006	Actual Admission Date:	08/03/2023	Attending Practitioner:	Current Visit Location:	Pharmacy Oncology Service	Rx No:	CDR0001124519	Order By:	Prescriber Dept.:	Cycle Start Date:	08/03/2023
---------------	------	------------------------	------------	-------------------------	-------------------------	---------------------------	--------	---------------	-----------	-------------------	-------------------	------------

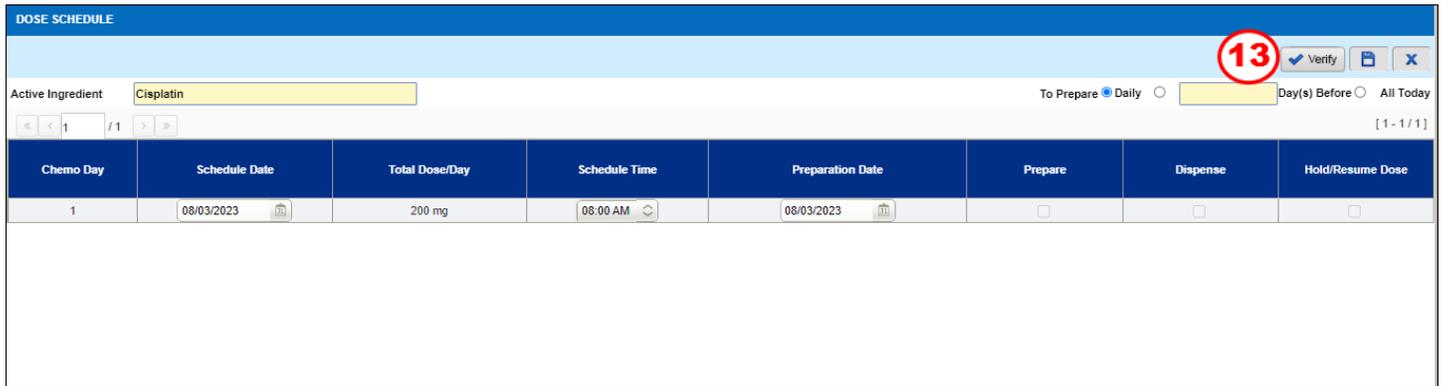
**PRESCRIPTION**

Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
CDRON0003	Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m2. OD (once daily), Day: 1 Schedule	4 vial	Remarks	ORDERED
	Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		

Figure 4.0-20 Verification

**STEP 12**

Click on the  button to verify the order and Dose Schedule screen will display as shown in Figure 4.0-21



DOSE SCHEDULE

Active Ingredient: Cisplatin

To Prepare:  Daily  Day(s) Before  All Today

Chemo Day	Schedule Date	Total Dose/Day	Schedule Time	Preparation Date	Prepare	Dispense	Hold/Resume Dose
1	08/03/2023	200 mg	08:00 AM	08/03/2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

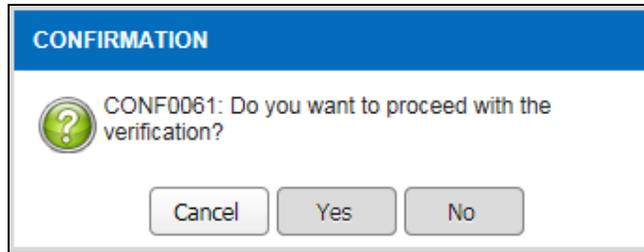
Figure 4.0-21 Dose Schedule

**Note**  
 User is able to set 'Preparation Date' manually or based on selection option on 'To Prepare' field:

- I. **Daily** - 'Preparation Date' will auto generate based on the same date as Schedule Date
- II. **Day(s) Before** - 'Preparation Date' will auto generate based on the backdated schedule date entered by user
- III. **All today** - 'Preparation Date' will auto generate current date for all open dose schedule record

**STEP 13**

Click on the  button to verify the Dose Schedule and Confirmation message will displayed as shown in Figure 4.0-22



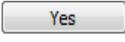
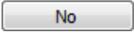
**CONFIRMATION**

CONF0061: Do you want to proceed with the verification?

Cancel Yes No

Figure 4.0-22 Confirmation Message

**Note**

- Click on the  button to confirm the verification.
- Click on the  button to cancel the verification.
- Verified order will flow to the preparation stage.

**Note**

**Intervention:**

- This function is for pharmacist to record intervention and modifies the prescription details.
- Right click on the  button and select Intervention function and Intervention screen will be displayed as per Figure 4.0-23.

- Select Intervention Reason  checkbox.
- Enter Remarks.
- Select Intervention Status  radio button. Pharmacist will select as Intervention Accepted after confirm status from prescriber.

**INTERVENTION**

History 📄 🔄 ✕

**INTERVENTION REASON**

[ 1 - 15 / 24 ]

	Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/>	Authenticity		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Contraindication		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Administration Error		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Interaction		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Not In Formulary		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Dose		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Drug		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Duration		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incompatibility		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incomplete Rx - Countersign		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incomplete Rx - Dose		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incomplete Rx - Dr's Stamp and Sign		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incomplete Rx - Drug		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incomplete Rx - Duration		<input type="radio"/>	<input type="radio"/>

**MODIFY ORDER**

Cycle Start Date: 08/03/2023 📅 Cycle End Date: 28/03/2023 📅

Cycle Duration: 21 Days BSA: 📏 m<sup>2</sup>

Calculate Dose Using: Actual Body Weight 📏 80 Kg

Active Ingredient: Cisplatin

Drug Name: Cisplatin 50mg/50ml Injection ⌵ Drug Category: A

Drug Indication: Antineoplastic, Platinum Compounds ⌵

Dosage Form: Parenteral Solution

Admin Route: IV Infusion ⌵

Dosage: 100 mg ⌵ /m<sup>2</sup>

Total Dose: 200 mg 🔗 [AUC Calculator](#)

Drug Volume: 200 ml 📏

Diluent: Sodium Chloride 0.9% 500mL IV soln ⌵

Diluent Volume: 800 ml 📏

Total Volume: 1000 ml 📏

Frequency: OD (once daily) ⌵

Infuse Over: 2 (hh) : 0 (mm)

Infusion Rate: 8.33 ml/Min ⌵

Chemo Day: 1 🔗 [Drug Schedule](#)

Remarks: 📄

Updated By: 👤

Updated Date: 08/03/2023 📅

**Figure 4.0-23 Intervention**

**Note**

- Click on the  button to save the record and alert message will be displayed as per Figure 4.0-24.
- Click on the  button to confirm saved.
- To view the intervention history, user is allowed to click on the  button to view as per Figure 4.0-25.

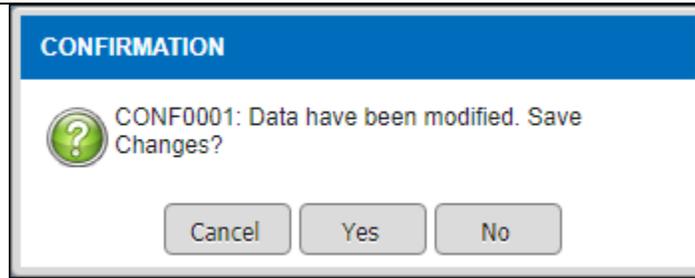


Figure 4.0-24 Confirmation Alert Message

INTERVENTION REASON HISTORY LISTING			
Date/Time	Intervention Reason	Remarks	Updated By
25/07/2019 10:08:21 AM	Suggest to Monitor Vital Signs/Lab Result	Need Doctor Approval	

Figure 4.0-25 Intervention Reason History Listing

**Hold CDR Order:**

CDR PREPARATION

Mykad: [Redacted] Age: 34 Years 02 Months 21 Days Gender: Male MRN: [Redacted]

Address: [Redacted] Phone And Email: [Redacted] Diagnosis: [Redacted] No known Allergies

Height: 170 cm Weight: 70 kg BMI/BSA: 24.2 / 1.82 m<sup>2</sup> (Last Updated: 12/10/2019) Nationality: Warganegara

Encounter No: 0022 Actual Admission Date: 11/10/2019 Current Visit Location: WAD 9 Rx No: W90000824598 Order By: [Redacted] Cycle Start Date: 12/10/2019 Transcribed By: [Redacted]

Original Prescription Serial No: RX9986543.09

PRESCRIPTION

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status
Cyclophosphamide 1g/50ml Injection	1365 mg	68.25 ml	750 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	2 vial	0 of 1 dose(s) supplied	0 vial	2 vial	<input type="checkbox"/>	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Doxorubicin HCl 50mg/25ml Injection	91 mg	45.5 ml	50 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	2 vial	0 of 1 dose(s) supplied	0 vial	2 vial	<input type="checkbox"/>	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Methotrexate 50mg/2ml Injection	15 mg	0.6 ml	15 mg, OD (once daily), Day: 1 Schedule	1 vial	0 of 1 dose(s) supplied	0 vial	1 vial	<input type="checkbox"/>	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Rituximab 500mg/50ml Injection	682.5 mg	68.25 ml	375 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	2 vial	0 of 1 dose(s) supplied	0 vial	2 vial	<input type="checkbox"/>	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		431.75 ml		1 bott		0 bott	1 bott	<input type="checkbox"/>	<input type="checkbox"/>	0 bott	Remarks	VERIFIED
Vincristine Sulphate 1mg Injection	2.55 mg	2.55 ml	1.4 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	3 vial	0 of 1 dose(s) supplied	0 vial	3 vial	<input type="checkbox"/>	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 100mL IV soln		97.45 ml		1 bott		0 bott	1 bott	<input type="checkbox"/>	<input type="checkbox"/>	0 bott	Remarks	VERIFIED
Prednisolone 5 mg Tablet	39.2 mg, 50 mg, 20 mg	21.84 tablet	60 mg/m <sup>2</sup> , TDS (3 times a day), Day: 1,2,3,4,5 Schedule	110 tablet	0 of 15 dose(s) supplied	22 tablet	110 tablet	<input type="checkbox"/>	<input type="checkbox"/>	0 tablet	Remarks	VERIFIED

Figure 4.0-26 Hold Order

**Note**

- This function is for pharmacist to hold/resume the CDR order.
- Right click on the  button and select **Hold Order** function and alert message will be displayed as per Figure 4.0-

27.

- Click on the  button and system will hold all the drugs in the prescription.
- Click on the  button and system will only hold the selected drug.
- Hold Order – Pharmacist Remarks will be displayed after clicking on the  or  button as per Figure 4.0-28.

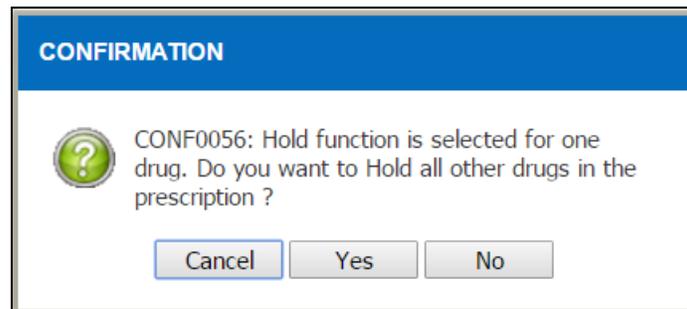
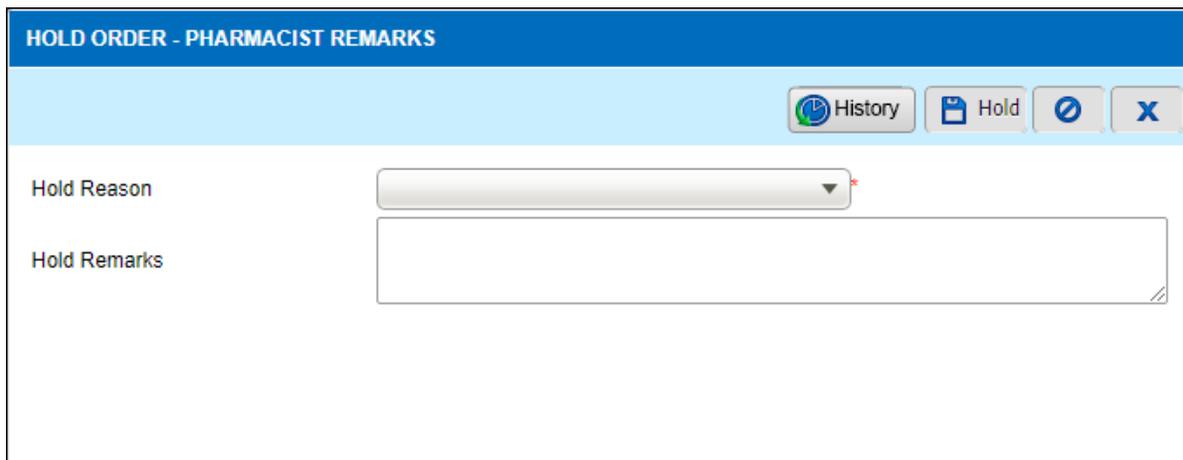


Figure 4.0-27 Confirmation Alert Message



A form titled "HOLD ORDER - PHARMACIST REMARKS" with a blue header. The form contains a "History" button, a "Hold" button, and a close button (X). Below the buttons, there is a "Hold Reason" dropdown menu and a "Hold Remarks" text area.

Figure 4.0-28 Hold Order-Pharmacist Remarks

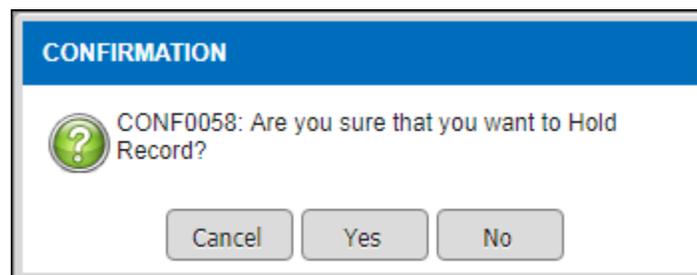
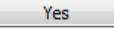


Figure 4.0-29 Confirmation Alert Message

**Note**

- Select **Hold Reason** from dropdown box
  - Authenticity

- *Contraindication*
  - *Drug Interaction*
  - *Inappropriate Dose*
  - *Inappropriate Drug*
  - *Inappropriate Duration*
  - *Inappropriate Frequency*
  - *Incompatibility*
  - *Others*
  - *Patient Refused*
  - *Polypharmacy*
  - *Suggest to Monitor Vital Signs/Lab Result*
  - *Wrong Patient*
- *Enter Hold Remarks is required*
  - Click on the  button to hold the order and alert message will display as per Figure 4.0-29
  - Click on the  button to confirm the Hold Record.
  - **Status** will change to *Verified Hold*.

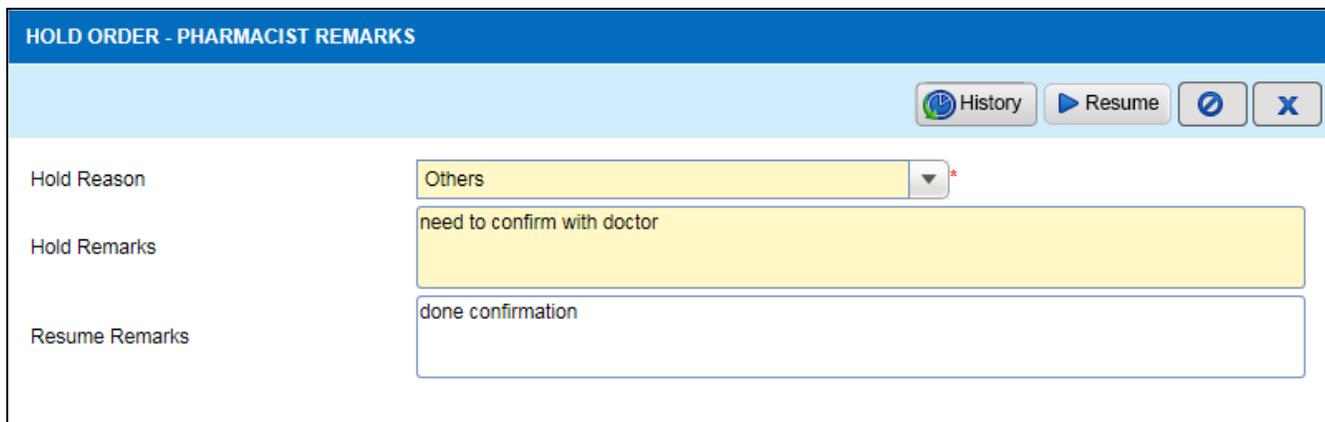


Figure 4.0-30 Hold Order-Pharmacist Remarks

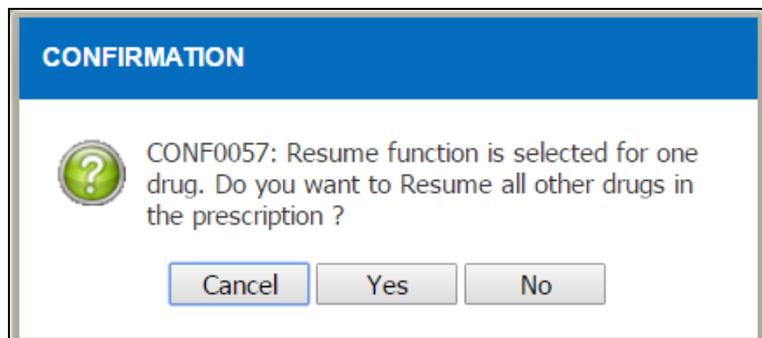


Figure 4.0-31 Confirmation Alert Message

HOLD REASON HISTORY LISTING					
					X
					[ 1 - 1 / 1 ]
<< < 1 / 1 > >>					
Date/Time	Screen	Hold Reason	Remarks	Resume Remarks	Updated By
21/10/2019 04:55:20 PM	Preparation	Others	need to confirm with doctor	done confirmation	

Figure 4.0-32 Hold Reason History Listing

**Note**

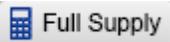
- Enter Resume Remarks if required.
- Click on the  button to resume the hold order and alert message will be displayed as Figure 4.0-31.
- Click on the  button to confirm the Resume Record.
- **Status** will change to Verified.
- To view the hold reason history, user is allowed to click on the  button to view as per Figure 4.0-32.

**CDR Preparation:**

CDR PREPARATION															
											Prescription X				
Address		Phone And Email		Age 23 Years 02 Months 07 Days		Gender Male		MRN HSM00241776		Vital Sign					
Height 180 cm		Weight 80 kg		BMI/BSA 24.7 / 2 m <sup>2</sup>		(Last Updated : 08/03/2023 )		Nationality : Warganegara							
Demographic   Medication Profile   Pharmacist Notes   Monitoring Parameter   Counselling History   Other Appointment															
Encounter No:	0006	Actual Admission Date:	08/03/2023	Attending Practitioner:		Current Visit Location:	Pharmacy Oncology Service	Rx No:	CDR0001124519	Order By:		Prescriber Dept.:		Cycle Start Date:	08/03/2023
PRESCRIPTION															
											Full Supply   Allocate   Outsource   CDR Cycle Histor				
											[ 1 - 1 / 1 ]				
Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status		
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 <a href="#">Schedule</a>	4 vial	0 of 1 dose(s) supplied	4 vial		<input type="checkbox"/> Details	1	<input type="checkbox"/> Details	0 vial	<a href="#">Remarks</a>	VERIFIED		
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott					0 bott				

Figure 4.0-33 CDR Preparation

**Note**

- **Prepare Qty** will be auto allocate after verify the order in Verification Stage
-  button is where system will allocate batch based on the new 'Preparation Date' if user edit the 'Preparation Date' in 'Schedule' hyperlink.
-  button is where system will auto select all balance dose schedule which is not supplied.

**STEP 14**

Click on the **Prepare Qty** hyperlink and Item Batch Details window will be displayed to allocate quantity as Figure 4.0-34



**ITEM BATCH DETAILS** 16

Drug Code: L01XA01000P3002XX  
 Drug Name: Cisplatin 50mg/50ml Injection  
 Supply: Day 1

Default SKU: vial  
 Dispense UOM: vial  
 Date From: 08/03/2023 To: 08/03/2023

DOSE SCHEDULE									BATCH DETAIL				
Chemo Day	Schedule Date	Total Dose/Day	UOM	Schedule Time	Preparation Date	Supplied	Dispense	Hold/Resume Dose	Batch No.	Expiry Date	Available Qty	UOM Qty	Allocate Qty
1	08/03/2023	200 mg	mg	08:00 AM	08/03/2023	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12312	04/01/2031	2082	4 vial	4

Total Location Quantity: 2086 Total Allocated Quantity: 4

Figure 4.0-34 Item Batch Details

**STEP 15**

Click on the selected **Supplied**  checkbox to select the dose to prepare

**STEP 16**

Click on the  button to save the record

After saved, Prepare Qty will display based on total allocated quantity in Item Batch Details Screen will display as shown in Figure 4.0-35.

**CDR PREPARATION** Prescription

Age: 23 Years 02 Months 07 Days | Gender: Male | MRN: HSM00241776

Address | Phone And Email | Diagnosis | Allergy: No Known Allergies | Vital Sign

Height: 180 cm | Weight: 80 kg | BMI/BSA: 24.7 / 2 m<sup>2</sup> (Last Updated: 08/03/2023) | Nationality: Warganegara

Encounter No: 0006 | Actual Admission Date: 08/03/2023 | Attending Practitioner: | Current Visit Location: Pharmacy Oncology Service | Rx No: CDR0001124519 | Order By: | Prescriber Dept.: | Cycle Start Date: 08/03/2023

**PRESCRIPTION** Full Supply | Allocate | Outsource | CDR Cycle History | Worksheet | Label | Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/>	1	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott		

Figure 4.0-35 CDR Preparation

**STEP 17**

Click on the selected **Prepared Admixture**  checkbox to proceed with preparation

**Note**

- Prepare Admixture Screen will save automatically upon clicking the checkbox
- If user needs to edit/change the input in Preparation details, click on Details hyperlink and system will display as Figure 4.0-36.

**PREPARATION DETAILS**

📄
🔄
✖

Preparation Using CSTD

Split Preparation  Split to 2 preparations

Storage

Below 0 °C  Refrigerate (2 - 8 °C)

Protect from Light  Room Temperature (< 25 °C)

Reconstitution Fluid

Preparation Instruction

**Figure 4.0-36 CDR Preparation Details**

**Note**

- User can click on the **Using CSTD**  checkbox to specify preparation using CSTD method.
- User can click on the **Split Preparation**  checkbox to proceed with split preparation
- if user do 'Split Preparation' (Figure 4.0-36) option selected on 'Prepare Admixture' details, it is mandatory for user to save/print label first before proceed with print worksheets.

**CDR PREPARATION**

📄 Prescription
✖



Age 23 Years 02 Months 07 Days

Gender Male

MRN HSM00241776

Address

Phone And Email

Diagnosis

Allergy: No Known Allergies

Vital Sign

Height 180 cm

Weight 80 kg

BMI/BSA 24.7 / 2 m<sup>2</sup>

(Last Updated : 08/03/2023)

Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006

Actual Admission Date: 08/03/2023

Attending Practitioner:

Current Visit Location

Pharmacy Oncology Service

Rx No: CDR0001124519

Order By:

Prescriber Dept: 18

Start Date: 08/03/2023

**PRESCRIPTION**
Full Supply | Allocate | Outsource | CDR Cycle History | Worksheet | Label | Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m2. OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	2	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott		

**Figure 4.0-37 CDR Preparation**

**STEP 18**

Click on the  button to view and print as shown in Figure 4.0-38



PhIS & CPS Project  
User Manual – Order Management - Cytotoxic Drug Reconstitution  
(CDR)



**CDR WORKSHEET**

MINISTRY OF HEALTH  
Hospital Seri Manjung

Preparation Date : 08/03/2023      Worksheet ID: 23-03-0001

Name : ██████████      Gender : Male      Rx. No. : CDR0001124519  
MRN : HSM00241776      Height/Weight/BSA : 180 cm/80 kg/2.0 m<sup>2</sup>      Regimen : Cisplatin 100mg/m<sup>2</sup>, 3-weekly  
ID No : ██████████      Ordered By : ██████████      Cycle No. : 1  
Age : 23Y 02M 07D      Current Visit Location : Pharmacy Oncology Service

No	ROA	Preparation Name	Drug/Diluent Name	Material Used							Storage	Instruction
				Total Dose	Drug / Diluent Vol	No of Dose	No of Pack	Allocated Qty	Batch No	Expiry Date		
1	INF	Cisplatin	Cisplatin 50mg/50ml Injection	100.0 mg	100 ml	1 dose(s) to supply	2	4 vial	12312	04/01/2031	Refrigerate (2 - 8 °C)	test manual
		Recons. Fluid:- Chemo Day:1	Sodium Chloride 0.9% 500mL IV soln		400 ml			2 bottle	P310B227	05/12/2024		
	INF	Cisplatin	Cisplatin 50mg/50ml Injection	100.0 mg	100 ml						Refrigerate (2 - 8 °C)	test manual
		Recons. Fluid:- Chemo Day:1	Sodium Chloride 0.9% 500mL IV soln		400 ml							

<b>Worksheet generated by</b> ██████████	<b>Worksheet &amp; label checked by</b> ██████████	<b>Prepared by</b> ██████████	<b>Final Product Checked by</b> ██████████
Date: 08/03/2023	Date:	Date:	Date:

Figure 4.0-38 CDR Worksheet

CDR PREPARATION

Prescription X

Age 23 Years 02 Months 07 Days      Gender Male      MRN HSM00241776

Address      Phone And Email      Diagnosis      Allergy: No Known Allergies      Vital Sign

Height 180 cm      Weight 80 kg      BMI/BSA 24.7 / 2 m<sup>2</sup>      (Last Updated : 08/03/2023)      Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006      Actual Admission Date: 08/03/2023      Attending Practitioner:      Current Visit Location: Pharmacy Oncology Service      Rx No: CDR0001124519      Order By: ██████████      Prescriber Dept.:      Cycle Date: 08/03/2023

PRESCRIPTION      Full Supply      Allocate      Outsource      CDR Cycle History      Worksheet      Label      Prepare

[ 1 - 1 / 1 ]

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Diap Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	2	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott		

Figure 4.0-39 CDR Preparation

**STEP 19**

Click on the button and CDR Edit Label screen will be displayed as shown in Figure 4.0-40

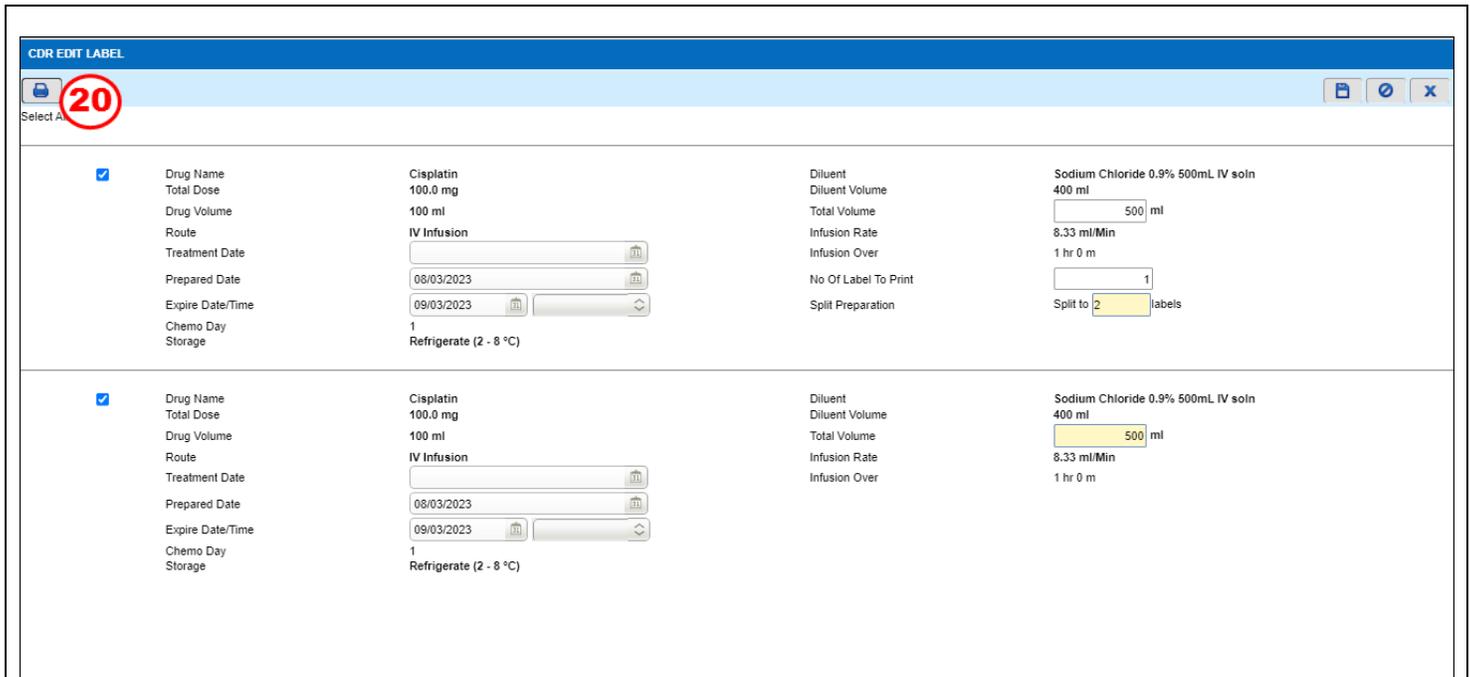


Figure 4.0-40 CDR Edit Label

**Note**

- For Split Preparation option selected in the preparation details (Figure 4.0-36), Total Volume will display a value after re-calculate based on value selected in Split Preparation dropdown list.
- in CDR Edit Label (Figure 4.0-40), user is allowed to modify **Total volume** where **Total Dose, Drug Volume, Diluent volume and Infusion Over** will be automatically calculate but only applicable if set Split Preparation

**STEP 20**

Click on the  button to print drug label

**Note**

Select all  checkbox to print all drug labels in the selected prescription.



HOSPITAL SERI MANJUNG			1 of 2			HOSPITAL SERI MANJUNG			2 of 2		
<b>CYTOTOXIC DRUG - Handle with care</b>						<b>CYTOTOXIC DRUG - Handle with care</b>					
TEST 1111						TEST 1111					
HSM00241776		Pharmacy Oncology		000101011111		HSM00241776		Pharmacy Oncology		000101011111	
Drug name : CISPLATIN			ROA : IV INFUSION			Drug name : CISPLATIN			ROA : IV INFUSION		
Dose : 100.0 MG		Vol :100 ML				Dose : 100.0 MG		Vol :100 ML			
IV Fluid : Sodium Chloride 0.9% 500mL IV soln						IV Fluid : Sodium Chloride 0.9% 500mL IV soln					
Inf. Rate :8.33 ml/Min		Inf. Over :1 hr 0 m		Vol :400 ml		Inf. Rate :8.33 ml/Min		Inf. Over :1 hr 0 m		Vol :400 ml	
Treatment Date : 08/03/2023			Total Vol : 500 ml			Treatment Date : 08/03/2023			Total Vol : 500 ml		
Prepared Date : 08/03/2023			Exp Date : 09/03/2023			Prepared Date : 08/03/2023			Exp Date : 09/03/2023		
Chemo Day : 1		Exp Time :				Chemo Day : 1		Exp Time :			
Storage : Refrigerate (2 - 8 °C)						Storage : Refrigerate (2 - 8 °C)					

Figure 4.0-41 Spilt Preparation Drug Label

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR			HOSPITAL PAKAR SULTANAH FATIMAH, MUAR		
<b>CYTOTOXIC DRUG - Handle with care</b>					
AXXXX XXXXX					
HPSF00268213		WAD 8 (MED - L)		401011085319	
Drug name DACARBAZINE			ROA : INF		
Dose : 585 MG		Vol :58.5 ML			
IV Fluid : Sodium Chloride 0.9% 500mL IV soln					
Inf. Rate : 5 ml/Min		Inf. Over : 1 hr 0 m		Vol : 241.5 ml	
Treatment Date : 25/09/2019			Total Vol : 300 ml		
Prepared Date : 25/09/2019			Exp Date : 27/09/2019		
Price : RM.00		Exp Time :			
Storage : "Refrigerate (2 - 8 °C)", Protect from Light					

Figure 4.0-42 CDR Drug Label

**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 07 Days    Gender Male    MRN HSM00241776

Address    Phone And Email    Diagnosis    Allergy: No Known Allergies    Vital Sign

Height 180 cm    Weight 80 kg    BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 08/03/2023)    Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006    Actual Admission Date: 08/03/2023    Attending Practitioner:    Current Visit Location: Pharmacy Oncology Service    Rx No: CDR0001124519    Order By:    Prescriber Dept.:    Cycle Start Date: 08/03/2023

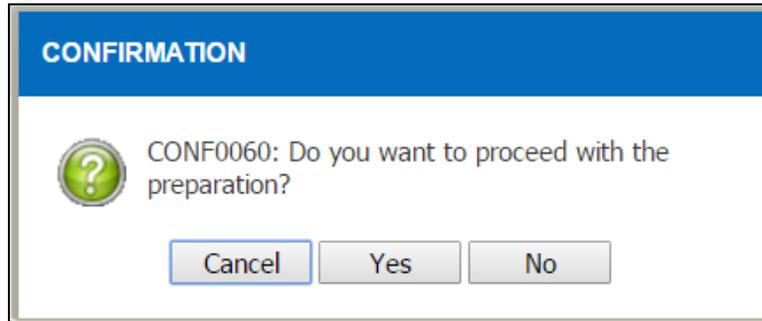
PRESCRIPTION    Full Supply    Allocate    Outsource    CDR Cycle History    Worksheet    Label    Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m2. OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	2	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott		

Figure 4.0-43 CDR Preparation

**STEP 21**

Click on the Prepare button to proceed with preparation and alert message will be displayed as Figure 4.0-44



**Figure 4.0-44 Confirmation Alert Message**

**Note**

- Click on the  button to proceed
- Click on the  button to cancel preparation.



### 4.1 Intervention CDR Order

**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 07 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 08/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment |

Encounter No: 0006 Actual Admission Date: 08/03/2023 Attending Practitioner: Pharmacy Oncology Service Rx No: CDR0001124519 Order By: Prescriber Dept.: Cycle Start Date: 08/03/2023

**PRESCRIPTION**

Full Supply Allocate Outsource CDR Cycle History Worksheet Label Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m2, OD (once daily), Day: 1 Schedules	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	Details	2	Details	0 vial	Remarks	VERIFIED
Combination Drug	200 mg	800 ml		2 bott		2 bott	2 bott				0 bott		
Intervention													
Hold Order													

Figure 4.1-1 CDR Preparation

#### STEP 1

Right click on the button and select **Intervention** function and the Intervention screen will be displayed as shown in Figure 4.1-2

**INTERVENTION**

History X

INTERVENTION REASON

Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/> Authenticity		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Contraindication		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Drug Interaction		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Dose		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Drug		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Duration		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Incompatibility		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Others		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Polypharmacy		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Suggest to Monitor Vital Signs/Lab Result		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Wrong Patient		<input type="radio"/>	<input type="radio"/>

**MODIFY ORDER**

Cycle Start Date: 24/09/2019 Cycle End Date: 21/10/2019

Cycle Duration: 28 Days BSA: 1.59 m<sup>2</sup>

Calculate Dose Using: Actual Body Weight 55 Kg

Active Ingredient: Bleomycin

Drug Name: Bleomycin HCl 15mg Injection Drug Category: A

Drug Indication: Antineoplastic, Cytotoxic Antibiotics

Dosage Form: Powder for IV Soln

Admin Route: Intravenous Bolus

Diluent: Sodium Chloride 0.9% 100mL IV soln

Diluent Volume: 100 ml

Total Volume: 105.3 ml

Frequency: OD (once daily)

Infuse Over: 0 (h) : 15 (mm)

Infusion Rate: 7 ml/Min

Chemo Day: 1,15 Drug Schedule

Remarks: Over 15 minutes

Updated By: DR KOH KENG HEE

Updated Date: 24/09/2019

Figure 4.1-2 Intervention

## STEP 2

Select **Intervention Reason** from *Intervention Reason* column:

- Authenticity
- Contraindication
- Drug Interaction
- Inappropriate Dose
- Inappropriate Drug
- Inappropriate Duration
- Inappropriate Frequency
- Incompatibility
- Others
- Polypharmacy
- Suggest to Monitor Vital Signs/Lab Result
- Wrong Patient

## STEP 3

Select **Intervention Status** radio button

### Note

Pharmacist will select  **Accepted** after confirming status with prescriber.

## STEP 4

Modify order details

## STEP 5

Click on the  button to save the record and alert message will be displayed as shown in Figure 4.1-3

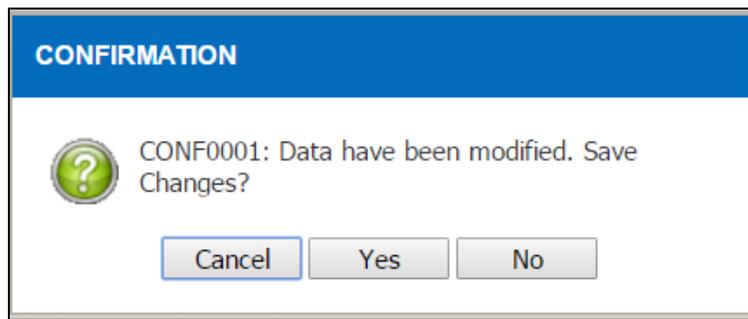


Figure 4.1-3 Alert Message

### Note

- Click on the  button to confirm saving.
- To view the intervention history, user is allowed to click on the  button.



INTERVENTION REASON HISTORY LISTING

< < 1 / 1 > > [1-1/1]

Date/Time	Intervention Reason	Remarks	Updated By
24/09/2019 02:54:20 PM	Others		

Figure 4.1-4 Pharmacist Remark



- After intervention is made, Order Details column will change to a hyperlink as shown in Figure 4.1-5, and user is allowed to click to view the original order details.
- Order details will be displayed as shown in Figure 4.1-6.

**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 07 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 08/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006 Actual Admission Date: 08/03/2023 Attending Practitioner: Pharmacy Oncology Service Rx No: CDR0001124519 Order By: Prescriber Dept.: Cycle Start Date: 08/03/2023

**PRESCRIPTION** Full Supply Allocate Outsource CDR Cycle History Worksheet Label Prepare

[ 1 - 1 / 1 ]

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	150 mg	150 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1	3 vial	0 of 1 dose(s) supplied	0 vial	3 vial	<input checked="" type="checkbox"/> Details	2	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml	Schedule	2 bott		0 bott	2 bott				0 bott		

Figure 4.1-5 Prescription After Intervention

**ORIGINAL RX**

Category Oncology - - Regimen Code CDRON00003 Regimen Description Cisplatin 100mg/m<sup>2</sup>, 3-weekly

Cycle Duration 21 Cycle No 1 Cycle Start Date 08/03/2023 Cycle End Date 28/03/2023

Remarks

Default Drug Name	Admin Route	Dosage	Total Dose	Infuse Over	Frequency	Chemo days	Diluent	Diluent Volume	Infusion Rate	Drug Remark	Intervention Reason	Intervention Remarks
Cisplatin 50mg/50ml Injection	IV Infusion	100 mg/m <sup>2</sup>	200 mg	2 Hours 0 Minutes	OD (once daily)	Day: 1	Sodium Chloride 0.9% 500mL IV soln	1000 ml	250 ml/Min		Inappropriate Dose	change dose

Figure 4.1-6 Original Rx

**Note**

In intervention screen, user also is allowed to do a Hold function for selected dose as shown in Figure 4.1-7

INTERVENTION

History Save Close

---

INTERVENTION REASON

[ 1 - 12 / 12 ]

	Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/>	Authenticity		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Contraindication		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Interaction		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Dose		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Drug		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Duration		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incompatibility		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Others		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Polypharmacy		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Suggest to Monitor Vital Signs/Lab Result		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Wrong Patient		<input type="radio"/>	<input type="radio"/>

---

MODIFY ORDER

Cycle Start Date: 24/09/2019 Cycle End Date: 21/10/2019

Cycle Duration: 28 Days BSA: 1.59 m<sup>2</sup>

Calculate Dose Using: Actual Body Weight 55 Kg

Active Ingredient: Bleomycin

Drug Name: Bleomycin HCl 15mg Injection Drug Category: A

Drug Indication: Antineoplastic, Cytotoxic Antibiotics

Dosage Form: Powder for IV Soln

Admin Route: Intravenous Bolus

---

Dosage: 10 mg /m2

Total Dose: 15.9 mg [AUC Calculator](#)

Drug Volume: 5.3 ml

Diluent: Sodium Chloride 0.9% 100mL IV soln

Diluent Volume: 100 ml

Total Volume: 105.3 ml

---

Frequency: OD (once daily)

Infuse Over: 0 (h) : 15 (mm)

Infusion Rate: 7 ml/Min

Chemo Day: 1,15 \* Drug Schedule 6

---

Remarks: Over 15 minutes

Updated By: DR KOH KENG HEE

Updated Date: 24/09/2019

Figure 4.1-7 Intervention

**STEP 6**

Click on the **Drug Schedule** hyperlink and dose schedule window will be display as Figure 4.1-8

DOSE SCHEDULE 8

Reset Split Dose Save Close

---

[ 1 - 1 / 1 ]

Chemo Day	Schedule Date	Total Dose/Day	UOM	Schedule Time	Preparation Date	Supplied	Dispense	Hold/Resume Dose
1	08/03/2023	150	mg	08:00 AM	08/03/2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <span style="float: right;"><span style="border: 1px solid red; border-radius: 50%; padding: 2px;">7</span></span>

Figure 4.1-8 Dose Schedule

**STEP 7**

Click on the **Hold/Resume Dose**  checkbox

**Note**

User is allowed to Hold only for Dose that does not yet check on the 'Supplied' or 'Dispense' checkbox

**STEP 8**

Click on the button to save the record



**Note**

User is allowed to hold drug by dose only through Intervention screen. once user selected Hold dose and save the records, it is mandatory for user to enter **Intervention Reason - Remarks** before can proceed to save intervention records (Figure 4.1-9)

The screenshot shows the 'INTERVENTION REASON' table with the following columns: Intervention Reason, Intervention Accepted, and Intervention Not Accepted. An 'ALERT' dialog box is overlaid on the table, displaying the message 'Please enter Remarks.' with an 'OK' button. The 'Others' row in the table is selected, and the 'Intervention Accepted' and 'Intervention Not Accepted' columns have radio buttons.

Intervention Reason	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/> Authenticity	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Contraindication	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Drug Interaction	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Dose	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Drug	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Duration	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Inappropriate Frequency	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Incompatibility	<input type="radio"/>	<input type="radio"/>
<input checked="" type="checkbox"/> Others	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Polypharmacy	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Suggest to Monitor Vital Signs/Lab Result	<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Wrong Patient	<input type="radio"/>	<input type="radio"/>

Figure 4.1-9 Intervention

**Note**

For partially supply, user is allowed to modify Total Dose/Day as shown in Figure 4.1-10 and it is applicable only for Infusion/Injectable Drug.

The screenshot shows the 'MODIFY ORDER' screen with various fields for drug details. The 'Drug Schedule' link is circled in red. The 'Remarks' field contains the text 'Over 15 minutes'.

Cycle Start Date	24/09/2019	Cycle End Date	21/10/2019	Diluent	Sodium Chloride 0.9% 100mL IV soln
Cycle Duration	28 Days	BSA	1.56 m <sup>2</sup>	Diluent Volume	100 ml
Calculate Dose Using	Actual Body Weight		55 Kg	Total Volume	105.3 ml
Active Ingredient	Bleomycin			Frequency	OD (once daily)
Drug Name	Bleomycin HCl 15mg Injection	Drug Category	A	Infuse Over	0 (h) : 15 (mm)
Drug Indication	Antineoplastic, Cytotoxic Antibiotics			Infusion Rate	7 ml/Min
Dosage Form	Powder for IV Soln			Chemo Day	1,15 * Drug Schedule
Admin Route	Intravenous Bolus			Remarks	Over 15 minutes
Dosage	10 mg /m2			Updated By	DR KOH KENG HEE
Total Dose	15.9 mg	AUC Calculator		Updated Date	24/09/2019
Drug Volume	5.3 ml				

Figure 4.1-10 Intervention

**STEP 9**

Click on the **Drug Schedule** hyperlink and dose schedule window will be display as Figure 4.1-11

DOSE SCHEDULE								
Chemo Day	Schedule Date	Total Dose/Day	UOM	Schedule Time	Preparation Date	Supplied	Dispense	Hold/Resume Dose
1	08/03/2023	150	mg	08:00 AM	08/03/2023	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 4.1-11 Dose Schedule

**STEP 10**

Enter **Modified Total Dose/Day**

**Note**

- Once users entered value for 'Modified Total Dose/Day', 'Modified Drug Volume' value will be auto calculated and display.
- If 1 chemo day/schedule date have multiple schedule time, only on first schedule time dose able to enter/edit 'Modified Total Dose/Day' value and the sequences of schedule time dose will follow the first schedule time dose.

**STEP 11**

Click on the  button to save the record

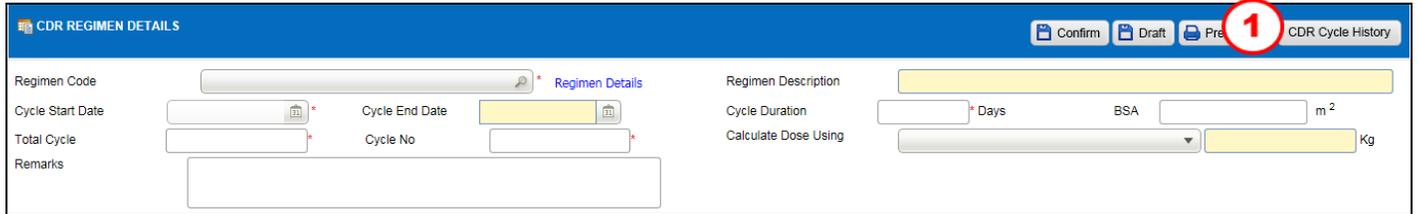
**Note**

After save the Dose Schedule with Modified Total Dose/Day value, 'Intervention Reason – Remarks' is mandatory for user to specify before can proceed to save intervention record as shown in Figure 4.1-12

INTERVENTION REASON				
	Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/>	Authenticity		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Contraindication		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Interaction		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Dose		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Drug		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Duration		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Incompatibility		<input type="radio"/>	<input type="radio"/>
<input checked="" type="checkbox"/>	Others		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Polypharmacy		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Suggest to Monitor Vital Signs/Lab Result		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Wrong Patient		<input type="radio"/>	<input type="radio"/>

Figure 4.1-12 Intervention

## 4.2 Renew Rx



**CDR REGIMEN DETAILS**

Buttons: Confirm, Draft, Print, **1** CDR Cycle History

Regimen Code: [Input] \* Regimen Details

Regimen Description: [Input]

Cycle Start Date: [Input] \* Cycle End Date: [Input]

Cycle Duration: [Input] \* Days BSA: [Input] m<sup>2</sup>

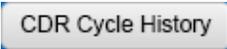
Total Cycle: [Input] \* Cycle No: [Input]

Calculate Dose Using: [Dropdown] [Input] Kg

Remarks: [Text Area]

Figure 4.2-1 CDR Order

### STEP 1

Click on the  button and CDR Cycle History screen will be display as Figure 4.2-2



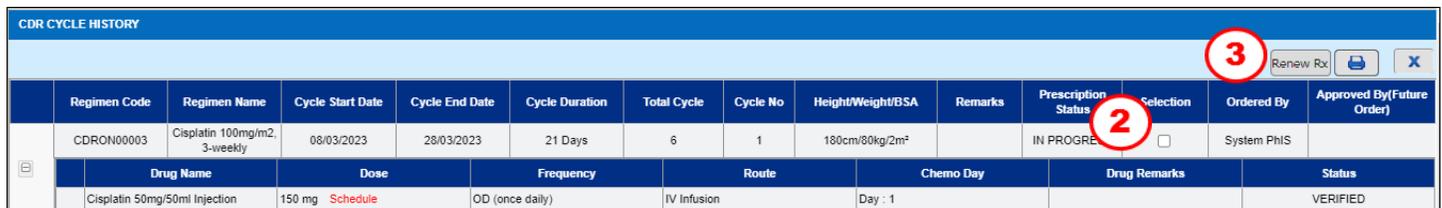
Regimen Code	Regimen Name	Cycle Start Date	Cycle End Date	Cycle Duration	Total Cycle	Cycle No	Height/Weight/BSA	Remarks	Prescription Status	Selection	Ordered By	Approved By(Future Order)
CDRON00003	Cisplatin 100mg/m2, 3-weekly	08/03/2023	28/03/2023	21 Days	6	1	180cm/80kg/2m <sup>2</sup>		IN PROGRESS	<input type="checkbox"/>	System PHIS	

Figure 4.2-2 CDR Cycle History

### Note

- This screen will show all the CDR Regimen history for the patient

- Click on the  button to view all Drug under the regimen as shown in Figure 4.2-3



Regimen Code	Regimen Name	Cycle Start Date	Cycle End Date	Cycle Duration	Total Cycle	Cycle No	Height/Weight/BSA	Remarks	Prescription Status	Selection	Ordered By	Approved By(Future Order)
CDRON00003	Cisplatin 100mg/m2, 3-weekly	08/03/2023	28/03/2023	21 Days	6	1	180cm/80kg/2m <sup>2</sup>		IN PROGRESS	<input type="checkbox"/>	System PHIS	
	<b>Drug Name</b>	<b>Dose</b>	<b>Frequency</b>	<b>Route</b>	<b>Chemo Day</b>	<b>Drug Remarks</b>	<b>Status</b>					
	Cisplatin 50mg/50ml Injection	150 mg Schedule	OD (once daily)	IV Infusion	Day : 1		VERIFIED					

Figure 4.2-3 CDR Cycle History

### STEP 2

Click on the  checkbox

### STEP 3

Click on the  button to renew the detail will be updated as shown in Figure 4.2-4

**MEDICATION ORDER**

Select Registered Patient: All | HSM00241776
Dispensing Location: Pharmacy Oncology Service
Visit Management | New Patient

Age: 23 Years 02 Months 08 Days
Gender: Male
MRN: HSM00241776

Address: [Redacted]
Phone And Email: [Redacted]
Diagnosis: [Redacted]
Allergy: No Known Allergies
Vital Sign: [Redacted]

Height: 180 cm | Weight: 80 kg | BMI/BSA: 24.7 / 2 m<sup>2</sup> | G6PD Deficiency: 
Update (Last Updated: 08/03/2023) | Nationality: Warganegara

**VISIT RECORD**

Original Prescriber Name: [Redacted]
Original Prescription Serial Number: 123456

Patient Diagnosis

Allergy

Adverse Drug Reaction

Nutritional Assessment

Normal Order

Infusion Order

Parenteral Nutrition

Cytotoxic Drug Reconstitution

Therapeutic Drug Monitoring

Radiopharmaceuticals

**CDR REGIMEN DETAILS**
Confirm | Draft | Prescription | CDR Cycle History

Regimen Code: CDRON00003

Cycle Start Date: 09/03/2023

Total Cycle: 6

Regimen Description: Cisplatin 100mg/m2, 3-weekly

Cycle End Date: 29/03/2023

Cycle No: 2

Regimen Duration: 21 Days

BSA: 2 m<sup>2</sup>

Actual Body Weight: 80 Kg

Remarks: [Redacted]

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Inf
1	Cisplatin 50mg/50ml Injection	100 mg/m2, OD (once daily), Day: 1	200 mg	200 ml	4 vial	i
2	Sodium Chloride 0.9% 500mL IV soln	Schedule	800 ml	800 ml	2 bott	

Oral/Others Drugs: [Redacted]

Injectable Drugs: [Redacted]

Active Ingredient: [Redacted] Update

Drug Category: [Redacted]

Dosage: [Redacted]

Total Dose: [Redacted] AUC Calculator

Figure 4.2-4 Medication Order

**STEP 4**

Select **Cycle Start Date**

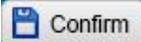
**STEP 5**

Enter **Cycle No**

**STEP 6**

Select **Original Prescriber Name**

**STEP 7**

Click on  the button to confirm the CDR Order

### 4.3 Sending Outsource

**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 08 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 09/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment |

Encounter No: 0006 Actual Admission Date: 08/03/2023 Current Visit Location Pharmacy Oncology Service Rx No: CDR0001124549 Order By: Cycle Start Date: 09/03/2023 Ordered

**PRESCRIPTION** Full Supply Allocate Outsource CDR Cycle History

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input type="checkbox"/>	1	<input type="checkbox"/>	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott		

Figure 4.3-1 CDR Preparation

**STEP 1**

Select and click on the **Outsource**  checkbox

**Note**

If **Prepare Qty** have been allocate, user need to de-allocate the drug first before can proceed for outsource

**STEP 2**

Click on the **Outsource** button and Outsource Details window will be display as Figure 4.3-2

**OUTSOURCE DETAILS** Cancel Outsource Send Outsource Request Confirm X

Age 23 Years 02 Months 08 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> Update (Last Updated : 09/03/2023 ) Nationality : Warganegara

**PHARMACY ORDER**

Outsource No Sending Status

Referred From Hospital Seri Manjung Referred To Hospital Alor Gajah

Contact Person / Office Contact Person / Office

Contact no / Ext No 1232131232 Contact no / Ext No 123456

Request Date/Time 09/03/2023 11:56 AM

Remarks

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
CDR0001124549	09/03/2023 11:50 AM	Cisplatin 50mg/50ml Injection	200 mg	100 mg/m <sup>2</sup> , OD (once daily), Day: 1, IV Infusion, Cycle Start Date: 09/03/2023	4 vial	0 vial	4 vial	Remarks

Figure 4.3-2 Outsource Details

**STEP 3**

Select **Referred To** from button

**STEP 4**

Enter **Contact Person / Office** and **Contact No / Ext No**

**OUTSOURCE DETAILS**

Cancel Outsource Send Outsource Request Confirm



Age 23 Years 02 Months 08 Days

Gender Male

MRN HSM00241776

Address

Phone And Email

Diagnosis

Allergy: No Known Allergies

Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> Update (Last Updated : 09/03/2023 ) Nationality : Warganegara

**PHARMACY ORDER**

Outsource No	Sending Status	
Referred From: Hospital Seri Manjung	Referred To: Hospital Alor Gajah	
Contact Person / Office	Contact Person / Office	
Contact no / Ext No: 1232131232	Contact no / Ext No: 123456	
Request Date/Time: 09/03/2023 11:56 AM		
Remarks		

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
CDR0001124549	09/03/2023 11:50 AM	Cisplatin 50mg/50ml Injection	200 mg	100 mg/m2, OD (once daily), Day: 1, IV Infusion, Cycle Start Date: 09/03/2023	4 vial	0 vial	4 vial	Remarks

Figure 4.3-3 Outsource Details

**STEP 5**

Click on the Send Outsource Request button and Confirmation Message will be display as Figure 4.3-4

**CONFIRMATION**



CONF0110: Are you sure you want to send Outsource Request?

Cancel Yes No

Figure 4.3-4 Confirmation Message

**Note**

- Click on the Yes button to send the request and Information Message will be display as Figure 4.3-5

**INFORMATION**



INFO0306: Outsource Request has been submitted successfully.

OK

Figure 4.3-5 Information Message

- Click on the OK button and screen will be updated as shown in Figure 4.3-6



**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 08 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 09/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006 Actual Admission Date: 08/03/2023 Attending Practitioner: Pharmacy Oncology Service Rx No: CDR0001124549 Order By: Prescriber Dept.: Cycle Start Date: 09/03/2023

**PRESCRIPTION** Full Supply Allocate Outsource Cancel Outsource CDR Cycle History Worksheet Label Prepare

[ 1 - 1 / 1 ]

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	0 vial	4 vial	<input type="checkbox"/> Details	1	<input checked="" type="checkbox"/> Details	0 vial	Remarks	OUTSOURCED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		0 bott	2 bott				0 bott		

Figure 4.3-6 CDR Preparation

**Note**

- Status of the drug will change to **OUTSOURCED**
- User is allowed to cancel the Outsource by click on the  button and Outsource Details window will be display as Figure 4.3-7

**OUTSOURCE DETAILS** Cancel Outsource Send Outsource Request X

Age 23 Years 02 Months 08 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> Update (Last Updated : 09/03/2023 ) Nationality : Warganegara

**PHARMACY ORDER**

Outsource No: CDR-11-08090019090323-001 Sending Status: Successful

Referred From: Hospital Seri Manjung Referred To: Hospital Alor Gajah \*

Contact Person / Office: \* Contact Person / Office: \*

Contact no / Ext No: 1232131232 \* Contact no / Ext No: 123456 \*

Request Date/Time: 09/03/2023 11:56 AM

Remarks:

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
CDR0001124549	09/03/2023 11:50 AM	Cisplatin 50mg/50ml Injection	200 mg	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 , IV Infusion , Cycle Start Date:09/03/2023	4 vial	0 vial	4 vial	Remarks

Figure 4.3-7 Outsource Details

- Click on the  button to cancel the Outsource record and Confirmation Message will be displayed as Figure 4.3-8
- If there is more than one (1) Outsource Drug, to cancel only one (1) drug user need to click on the **Details** Hyperlink of the selected Drug and Outsource Details screen will be display as Figure 4.3-7 and click on the  button

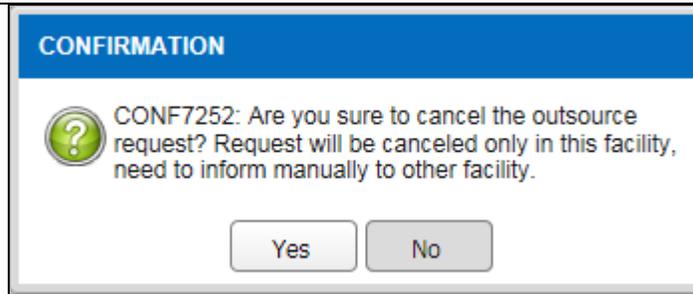


Figure 4.3-8 Confirmation Message

**Note**

- Click on the  button to cancel the request and Information Message will be display as Figure 4.3-9
- For cancel outsource, user need to inform the other facility manually

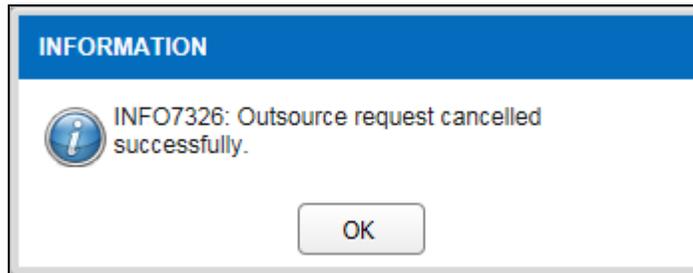


Figure 4.3-9 Information Message

- Click on the  button and status of the drug will change to **VERIFIED**

**CDR PREPARATION**

Prescription X

Age 23 Years 02 Months 08 Days Gender Male MRN HSM00241776

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 180 cm Weight 80 kg BMI/BSA 24.7 / 2 m<sup>2</sup> (Last Updated : 09/03/2023 ) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0006 Actual Admission Date: 08/03/2023 Attending Practitioner: Current Visit Location: Pharmacy Oncology Service Rx No: CDR0001124549 Order By: Prescriber Dept.: Cycle Start Date: 09/03/2023 **6**

PRESCRIPTION Full Supply Allocate Outsource Cancel Outsource CDR Cycle History Worksheet Label Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	0 vial	4 vial	<input type="checkbox"/> Details	1	<input checked="" type="checkbox"/> Details	0 vial	Remarks	OUTSOURCED
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		0 bott	2 bott				0 bott		

Figure 4.3-10 CDR Preparation

**STEP 6**

Click on the  button to proceed with preparation

## 4.4 Receive Outsource

**PHARMACY INFORMATION SYSTEM**

External Notification

Online Indent Request Received:	0	Online Issue Request Received:	2
Online External CDR Request Received:	11	Online External CDR Result Received:	0
Online External PN Request Received:	0	Online External PN Result Received:	0
External Radio Order Request Received:	0	External Radio Order Result Received:	0
Online Contract Request Received:	19	Online Return Inter Facility Received:	0
Online SPUB R1 Request Received:	0	LIS Result Received:	0
Online Issue SPUB Request Received:	0		
Online Issue Manufacturing Received:	0		

Figure 4.4-1 External Notification

### STEP 1

Click on the **Online External CDR Request Received** 17 button and Outsource Listing window will be display as Figure 4.4-2

**OUTSOURCE LISTING**

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Register
<a href="#">CDR-11-14010002190820-005</a>		Male	Hospital Kuala Lumpur	19/08/2020 2:29 PM	Registered
<a href="#">CDR-11-14010002191020-013</a>		Male	Hospital Kuala Lumpur	19/10/2020 10:48 AM	Registered
<a href="#">CDR-11-14010002121020-010</a>		Female	Hospital Kuala Lumpur	12/10/2020 4:21 PM	Registered
<a href="#">CDR-11-03090018171220-002</a>		Male	Hospital Tanah Merah	17/12/2020 9:16 AM	Registered
<a href="#">CDR-11-14010002100221-043</a>		Female	Hospital Kuala Lumpur	10/02/2021 12:06 PM	Registered
<a href="#">CDR-11-14010002260221-044</a>		Male	Hospital Kuala Lumpur	26/02/2021 4:36 PM	Registered
<a href="#">CDR-11-03090018100321-004</a>		Female	Hospital Tanah Merah	10/03/2021 8:58 PM	Registered
<a href="#">CDR-11-14010002161020-012</a>		Female	Hospital Kuala Lumpur	16/10/2020 11:51 AM	Registered
<a href="#">CDR-11-14010002231220-041</a>		Female	Hospital Kuala Lumpur	23/12/2020 4:08 PM	Registered
<a href="#">CDR-11-1401000220722-045</a>		Female	Hospital Kuala Lumpur	22/07/2022 10:36 AM	Registered

Figure 4.4-2 Outsource Listing

### Note

Click on the *Outsource No* hyperlink to view *Outsource Details* as Figure 4.4-3



**OUTSOURCE DETAILS**

Cancel Outsource Send Outsource Request X

Age 34 Years 05 Months 28 Days Gender Female MRW HSM00241772\_O

Address Phone And Email Diagnosis Allergy: Need To Be Assessed Vital Sign

Height cm Weight kg BMI/BSA 0/0 m<sup>2</sup> (Last Updated : ) Nationality: Warganegara

**PHARMACY ORDER**

Outsource No: CDR-11-14010002061022-001 Sending Status

Referred From: Hospital Kuala Lumpur Referred To: Hospital Seri Manjung \*

Contact Person / Office \* Contact Person / Office \*

Contact no / Ext No: 0129312398 \* Contact no / Ext No: 2 \*

Request Date/Time: 06/10/2022 3:01 PM

Remarks

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
SW260001371531	06/10/2022 12:00 AM	Cisplatin 50mg/50ml Injection	138 mg	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	3 vial	0 vial	3 vial	Remarks
SW260001371531	06/10/2022 12:00 AM	Fluorouracil 1g/20ml Injection	1380 mg	1000 mg/m <sup>2</sup> , OD (once daily), Day: 2,3,4,5 IV Infusion Cycle Start Date : 06/10/2022	8 vial	0 vial	8 vial	Remarks
SW260001371531	06/10/2022 12:00 AM	Docetaxel 80mg Injection	103.5 mg	75 mg/m <sup>2</sup> , OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	2 vial	0 vial	2 vial	Remarks

Figure 4.4-3 Outsource Details

**Note**

User is allowed to cancel the transaction by click on the  button

**OUTSOURCE LISTING**

X

< 2 / 2 >

[ 11 - 11 / 11 ]

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Register
CDR-11-14010002061022-001	MXXXXXX	Female	Hospital Kuala Lumpur	06/10/2022 3:01 PM	Register <b>2</b>

Figure 4.4-4 Outsource Listing

**STEP 2**

Click on the Register hyperlink to register outsource patient and Ward Management window will be display as Figure 4.4-5

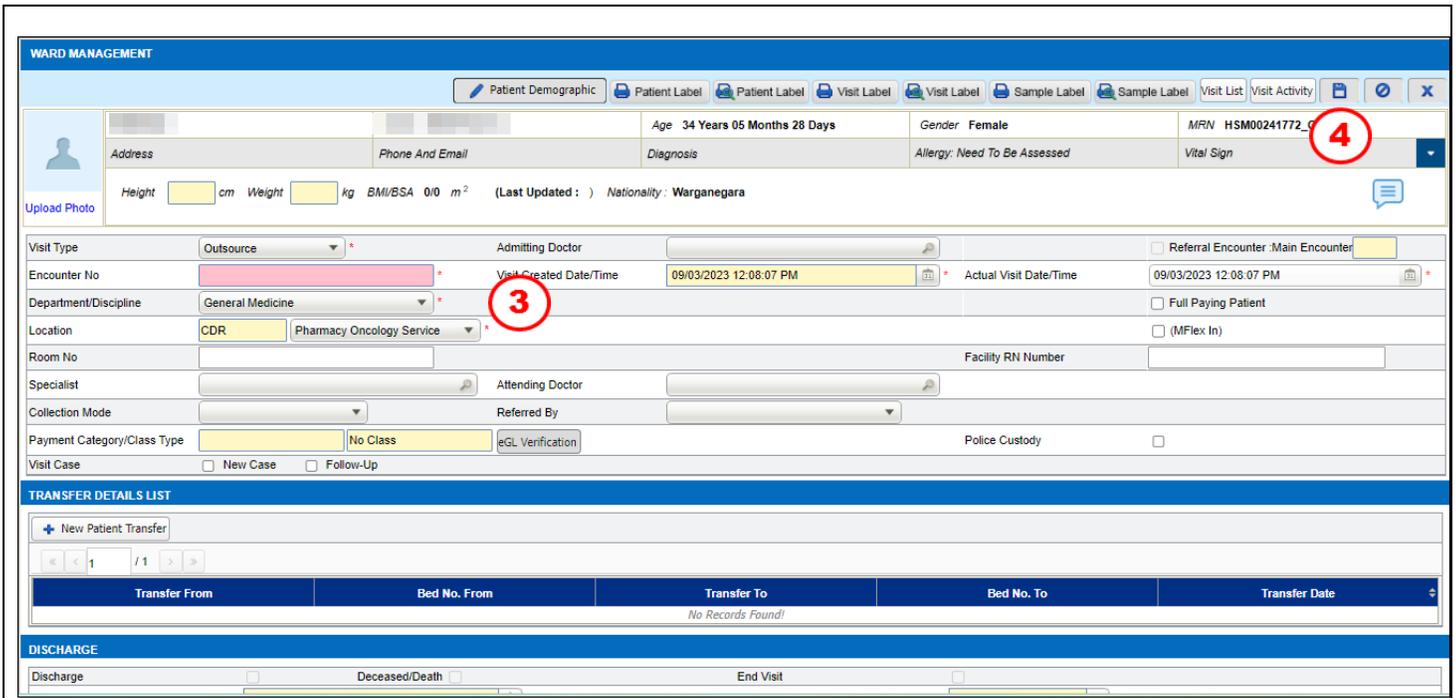


Figure 4.4-5 Ward Management

**STEP 3**

Select **Department/discipline** and **Location** from dropdown menu

**STEP 4**

Click on the  button to save the registered outsource patient

**Note**

After save, user need to proceed with record prescription process as follow



Figure 4.4-6 Medication Order

**STEP 5**

Search for the outsource registered patient and screen will be shown as Figure 4.4-7



# PhIS & CPS Project User Manual – Order Management - Cytotoxic Drug Reconstitution (CDR)



**MEDICATION ORDER**

Select Registered Patient: All | HSM00241759 | Dispensing Location: Pharmacy Oncology Service | Visit Management | New Patient

Age: 24 Years 09 Months 23 Days | Gender: Male | MRN: HSM00241759

Diagnosis: **Known Allergies[ 1 ]** | Vital Sign

Height: 170 cm | Weight: 71 kg | BMI/BSA: 24.6 / 1.83 m<sup>2</sup> | G6PD Deficiency:  | Update (Last Updated: 07/03/2023) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

**VISIT/ADMISSION**

Encounter No: | Visit Type: Inpatient | Location: | Department: | Clear | Save | Patient Label | Patient sticker

Full Paying Patient | Facility RN Number: | Bed No: | MFlex In

Encounter No	Visit/Admission Date	Visit Type	Renew Visit	Visit Location	Department	Discharge Date
0011	10/02/2023	Outpatient	Renew Visit	Outpatient Pharmacy	Pharmacy	
0003	10/01/2023	Outpatient	Renew Visit	Outpatient Pharmacy	Pharmacy	
0006	26/10/2022	Outpatient	Renew Visit	Outpatient Pharmacy	Pharmacy	

[ 1 - 3 / 6 ]

**PARTIAL SUPPLY**

Order Date	Order Location	Visit Type	Department	Prescription No.	Original Prescription No.	Next Collection Date	Next Collection Mode	Dispense Location
07/03/2023 04:54 PM	WAD 3	Inpatient	General Medicine	W30001124507	45111	08/03/2023		Ward Supply Pharmacy

[ 1 - 1 / 1 ]

Figure 4.4-7 Medication Order

## STEP 6

Double click on the outsource Visit Type

**MEDICATION ORDER**

Select Registered Patient: All | HSM00241772\_O | Dispensing Location: Pharmacy Oncology Service | Visit Management | New Patient

Age: 34 Years 05 Months 28 Days | Gender: Female | MRN: HSM00241772\_O

Diagnosis: | Allergy: Need To Be Assessed | Vital Sign

Height: 124 cm | Weight: 55 kg | BMI/BSA: 35.8 / 1.38 m<sup>2</sup> | G6PD Deficiency:  | Update (Last Updated: ) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

**VISIT/ADMISSION**

Encounter No: 0005 | Visit Type: Outsource | Location: Pharmacy Oncology Service | Department: General Medicine | Clear | Patient Label | Patient sticker

Facility RN Number: |  Breast Feeding |  Pregnant | Week: |  MFlex In

**VISIT RECORD**

CDR REGIMEN DETAILS

Regimen Code: | Regimen Details | Regimen Description: | Outsource Form | Online Outsource | Confirm | Draft | Prescription | CDR Cycle History

Cycle Start Date: | Cycle End Date: | Cycle Duration: | Days | BSA: | m<sup>2</sup>

Total Cycle: | Cycle No: | Calculate Dose Using: | Kg

Remarks: | PRESCRIPTION

**Cytotoxic Drug Reconstitution** | Seq No. | Drug/Diluent Name | Order Details | Total Dose | Dose Qty | Order Qty | Drug Info | Oral/Others Drugs | Injectable Drugs | Active Ingredient | Update

Therapeutic Drug Monitoring | No record found

Figure 4.4-8 Medication Order

## STEP 7

Click on the **Cytotoxic Drug Reconstitution** tab

## STEP 8

Click on the **Online Outsource** button and Outsource Listing screen will be display as Figure 4.4-9

OUTSOURCE LISTING					
Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Register
CDR-11-14010002061022-001	MXXXXXX	Female	Hospital Kuala Lumpur	06/10/2022 3:01 PM	Registered

Figure 4.4-9 Outsource Listing

**STEP 9**

Double click on the list and the CDR Order will be updated as shown in Figure 4.4-10

**MEDICATION ORDER**

Age 34 Years 05 Months 28 Days | Gender Female | MRN HSM00241772\_O

Address | Phone And Email | Diagnosis | Allergy: Need To Be Assessed | Vital Sign

Height 124 cm | Weight 55 kg | BMI/BSA 35.8 / 1.38 m<sup>2</sup> | G6PD Deficiency  | Update (Last Updated : ) | Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

**VISIT/ADMISSION**

**VISIT RECORD**

CDR REGIMEN DETAILS

Regimen Code: CDRON00004 | Regimen Description: Cisplatin 100mg/m<sup>2</sup> + Docetaxel 75mg<sup>2</sup> + SFU 1g/m<sup>2</sup>, 4days

Cycle Start Date: 06/10/2022 | Cycle End Date: 26/10/2022 | Cycle Duration: 21 Days | BSA: m<sup>2</sup>

Total Cycle: 6 | Cycle No: 1 | Calculate Dose Using: Actual Body Weight | 55 Kg

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
	Fluorouracil 1g/20ml Injection	1000 mg/m <sup>2</sup> , OD (once daily), Day: 2,3,4,5	1380 mg	27.6 ml	8 vial	
	Sodium Chloride 0.9% 500mL IV soln	Schedule		944.8 ml	8 bott	
	Docetaxel 80mg Injection	75 mg/m <sup>2</sup> , OD (once daily), Day: 1	103.5 mg	10.35 ml	2 vial	
	Sodium Chloride 0.9% 250mL IV soln	Schedule		229.3 ml	1 bott	
	Cisplatin 50mg/50ml Injection	100 mg/m <sup>2</sup> , OD (once daily), Day: 1	138 mg	138 ml	3 vial	

Oral/Others Drugs | Injectable Drugs

Active Ingredient | Drug Category | Dosage | Total Dose | Admin Route

Figure 4.4-10 Medication Order

**STEP 10**

Click on the button to confirm the order

**MEDICATION ORDER**

Age 34 Years 05 Months 28 Days    Gender Female    MRN HSM00241772\_O

Address    Phone And Email    Diagnosis    Allergy: Need To Be Assessed    Vital Sign

Height 124 cm    Weight 55 kg    BMI/BSA 35.8 / 1.38 m<sup>2</sup>    G6PD Deficiency     Update (Last Updated : )    Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

**VISIT/ADMISSION**

**VISIT RECORD**

Patient Diagnosis    Allergy    Adverse Drug Reaction    Nutritional Assessment    Normal Order    Infusion Order

**CDR REGIMEN DETAILS**    Outsource Form    Online Outsource    PROCEED TO DISPENSE    Prescription    Verify

Regimen Code: CDRON0004    Regimen Description: Cisplatin 100mg/m2 + Docetaxel 75mg/m2 + 5FU 1g/m2, 4days

Cycle Start Date: 06/10/2022    Cycle End Date: 26/10/2022    Cycle Duration: 21 Days    BSA: m<sup>2</sup>

Total Cycle: 6    Cycle No: 1    Calculate Dose Using: Actual Body Weight    55 Kg

Remarks

Figure 4.4-11 Medication Order

**Note**

- Click on the  button to view outsource details as shown in Figure 4.4-12

**OUTSOURCE DETAILS**    Cancel Outsource    Send Outsource Request

Age 34 Years 05 Months 28 Days    Gender Female    MRN HSM00241772\_O

Address    Phone And Email    Diagnosis    Allergy: No Known Allergies    Vital Sign

Height 124 cm    Weight 55 kg    BMI/BSA 35.8 / 1.38 m<sup>2</sup>    Update (Last Updated : )    Nationality: Warganegara

**PHARMACY ORDER**

Outsource No: CDR-11-14010002061022-001    Sending Status

Referred From    Referred To: Hospital Seri Manjung

Contact Person / Office: Pharmacist 2    Contact Person / Office

Contact no / Ext No: 0129312398    Contact no / Ext No: 2

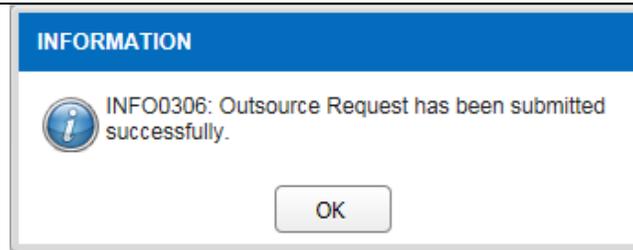
Request Date/Time: 06/10/2022 3:01 PM

Remarks

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
SW260001371531	06/10/2022 12:00 AM	Fluorouracil 1g/20ml Injection	1380 mg	1000 mg/m2, OD (once daily), Day: 2,3,4,5 IV Infusion Cycle Start Date : 06/10/2022	8 vial	0 vial	8 vial	Remarks
SW260001371531	06/10/2022 12:00 AM	Cisplatin 50mg/50ml Injection	138 mg	100 mg/m2, OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	3 vial	0 vial	3 vial	Remarks
SW260001371531	06/10/2022 12:00 AM	Docetaxel 80mg Injection	103.5 mg	75 mg/m2, OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	2 vial	0 vial	2 vial	Remarks

Figure 4.4-12 Outsource Details

- User can proceed with dispensing process (Verification, Prepare and Dispense)
- To proceed with CDR Dispensing process, please refer
  - I. Section 4.0 Cytotoxic Drug Reconstitution (CDR) Order, Verify and Prepare
  - II. Section 7.0 CDR Dispensing
- Once user dispense outsource order, system will shown Information Message as Figure 4.4-13



**Figure 4.4-13 Information Message**

- Click on the  button and system will send CDR Result back to sending Facility.



## 4.5 Outsource Result Received

### Note

After receiving facility dispense outsource drug, sending facility will receive external notification for the outsource result

**PHARMACY INFORMATION SYSTEM**

**MENU**

- Home
- Patient Management
- Order Management
- Inventory
- Adverse Drug Reaction
- Pharmacy Transaction
- MAR
- Maintenance
- Report/Enquiry

**TASK LIST**

Transaction Type: All Search

Transaction Type	Transaction No.	Item Group	Date/Time	Task Status	From Unit/Department	From User
Receive Internal	D02PS001-0000008		25/07/2019 06:36 PM	Pending For Approval	Farmasi Logistik Hospital	
Special Drug Request	<a href="#">HSM0016/2019</a>		31/07/2019 11:54 AM	Pending Pharmacist's Review		
Special Drug Request	<a href="#">HSM0018/2019</a>		31/07/2019 04:46 PM	Pending Pharmacist's Review		
Special Drug Request	<a href="#">HSM0022/2019</a>		01/08/2019 10:51 AM	Pending Pharmacist's Review		
Special Drug Request	<a href="#">HSM0023/2019</a>		01/08/2019 02:19 PM	Pending Pharmacist's Review		

**NOTIFICATION**

No Records Found!

External Notification

Notification Type	Notification No	Title	Date	From Facility/Unit	Attachment
Online External CDR Request Received:	17	Online External CDR Result Received:			<a href="#">2</a>
Online External PN Request Received:	3	Online External PN Result Received:			0
External TDM Request Received:	8	External TDM Result Received:			1
Online SPUB R1 Request Received:	16				
Online Issue SPUB Request Received:	0				
Online Issue Manufacturing Received:	0				

Figure 4.5-1 Online External CDR Result Received

### STEP 1

Click on the **Online External CDR Result Received** [2](#) button

### Note

System will display Outsource Listing screen as shown in Figure 4.5-2

**OUTSOURCE LISTING**

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Register
CDR-11-14010002110919-003	AXXXX XXXXXX	Male	Hospital Seri Manjung	11/09/2019 5:10 PM	<a href="#">Receive</a>
CDR-11-14010002100919-007	DXXXX XXXXXX XXX XXXXXXX	Male	Hospital Seri Manjung	10/09/2019 6:12 PM	<a href="#">Receive</a>

Figure 4.5-2 Outsource Listing

### STEP 2

Click on the **Receive** hyperlink and Outsource Details will display as Figure 4.5-3



# PhIS & CPS Project

## User Manual – Order Management - Cytotoxic Drug Reconstitution (CDR)



**OUTSOURCE DETAILS**

Cancel Outsource
Send Outsource Request
X

	<input type="text"/>	<input type="text"/>	Age 34 Years 05 Months 28 Days	Gender Female	M/RN HSM00241772_O
Address <input type="text"/>		Phone And Email <input type="text"/>		Diagnosis <input type="text"/>	
Allergy: No Known Allergies		Vital Sign <input type="text"/>			

Height  cm Weight  kg BMI/BSA 35.8 / 1.38 m<sup>2</sup> Update (Last Updated : ) Nationality : Warganegara

**PHARMACY ORDER**

Outsource No <input type="text" value="CDR-11-14010002061022-001"/>	Sending Status <input type="text"/>
Referred From <input type="text"/>	Referred To <input type="text" value="Hospital Seri Manjung"/>
Contact Person / Office <input type="text" value="Pharmacist 2"/>	Contact Person / Office <input type="text"/>
Contact no / Ext No <input type="text" value="0129312398"/>	Contact no / Ext No <input type="text" value="2"/>
Request Date/Time <input type="text" value="06/10/2022 3:01 PM"/>	
Remarks <input style="height: 20px;" type="text"/>	

Rx No	Rx Date	Drug Name	Dose	Order Detail	Order Qty	Prev Disp Qty	Bal Qty	Remarks
SW260001371531	06/10/2022 12:00 AM	Fluorouracil 1g/20ml Injection	1380 mg	1000 mg/m2, OD (once daily), Day: 2,3,4,5 IV Infusion Cycle Start Date : 06/10/2022	8 vial	0 vial	8 vial	<a href="#">Remarks</a>
SW260001371531	06/10/2022 12:00 AM	Cisplatin 50mg/50ml Injection	138 mg	100 mg/m2, OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	3 vial	0 vial	3 vial	<a href="#">Remarks</a>
SW260001371531	06/10/2022 12:00 AM	Docetaxel 80mg Injection	103.5 mg	75 mg/m2, OD (once daily), Day: 1 IV Infusion Cycle Start Date : 06/10/2022	2 vial	0 vial	2 vial	<a href="#">Remarks</a>

**RECEIVE DETAILS**

Received By <input type="text"/>	Date/Time <input type="text" value="23/10/2019 5:17 PM"/>
Remarks: <input style="height: 20px;" type="text"/>	<span style="font-size: 2em; border: 2px solid red; border-radius: 50%; padding: 5px; display: inline-block;">3</span> <span style="margin-left: 20px;">+ Add</span>

No.	Received By	Received Date	Remarks
<i>No Records Found!</i>			

**Figure 4.5-3 Outsource Details**

**STEP 3**

Enter **Remarks** (if required) and click on the button

**Note**

Information will be updated as shown in Figure 4.5-4

**OUTSOURCE DETAILS**

MRN HSM00241772\_0 **4**

Age 34 Years 05 Months 28 Days Gender Female

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 124 cm Weight 55 kg BMI/BSA 35.8 / 1.38 m<sup>2</sup> Update (Last Updated : ) Nationality : Warganegara

**PHARMACY ORDER**

**RECEIVE DETAILS**

Received By [Name] Date/Time 23/10/2023 5:20 PM

Remarks: Receive + Add

No.	Received By	Received Date	Remarks
1	[Name]	23/10/2023 17:20	Receive

Figure 4.5-4 Outsource Details

**STEP 4**

Click on the  button to save the record

## 5.0 Manage Prescription

This function is for pharmacist to modify CDR record prescription

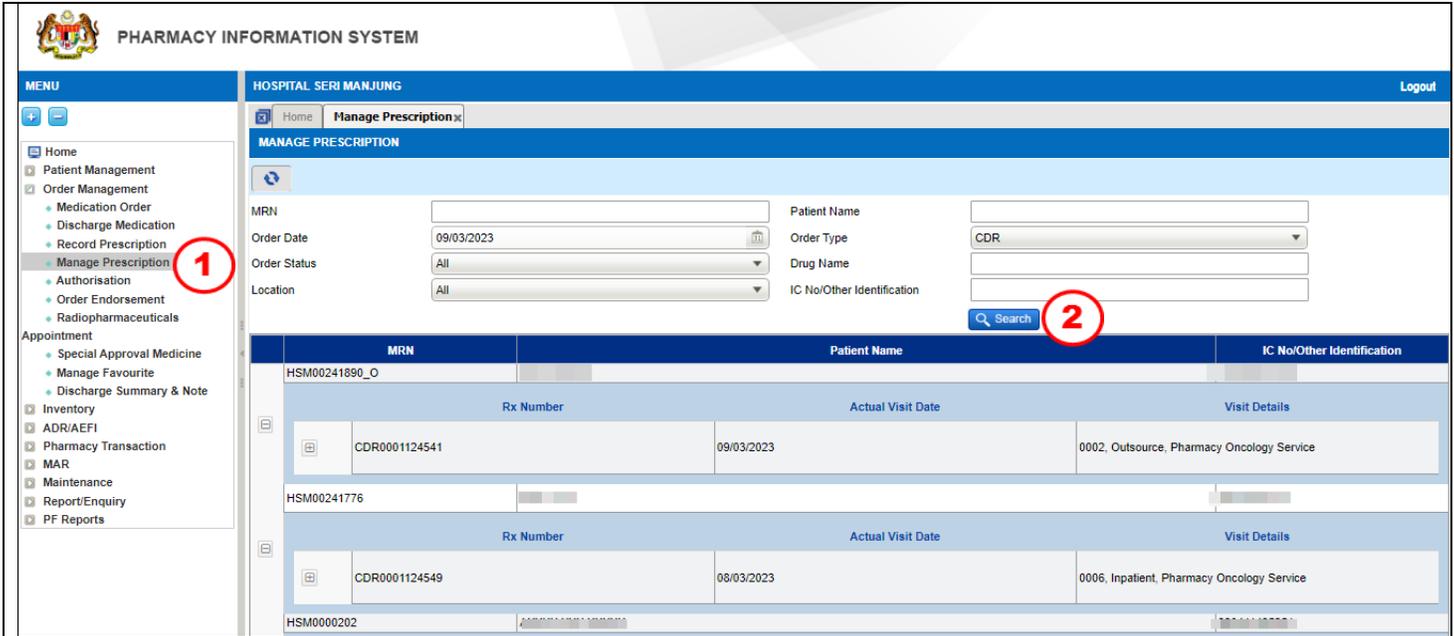


Figure 5.0-1 Manage Prescription

### STEP 1

Click on 'Order Management' menu and followed by 'Manage Prescription' sub-menu

### Note

On this listing page, various Search criteria is provided as below:

No	Field	Description	Remark
a	MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> <li>• Scan the MRN using barcode scanner.</li> <li>• Type the MRN either full or partial</li> </ul>
b	Order date	Order date	Allow to search by ordered date
c	Order Status	According to Order in which stage	Able to filter by order status
d	Location	Patient visit location	Able to filter and search patient name by visit location
e	Patient Name	Patient Name	Allow to search by patient name
f	Order Type	- Normal - CDR - IV - PN - Radiopharmaceuticals	Allow to search by order type
g	Drug Name	Drug Name	Allow to search by full or partial
h	IC No/Other Identification	IC No	Allow to search by IC Number
i	Original Prescription Serial No	Original Prescription Serial No	Allow to search Original Prescription Serial No

Table 5.0-1

**Note**

Search CDR patient by select **Order Type** as **CDR**

**STEP 2**

Click on the button to search for CDR Patient

**Modify Order**

MRN	Patient Name				IC No/Other Identification			
HSM00241890_O								
Rx Number		Actual Visit Date		Visit Details				
CDR0001124541		09/03/2023		0002, Outsource, Pharmacy Oncology Service				
Drug name	Dosage	Start Date	End Date	Order Qty	Order Status	Prescriber Name		
3  4 Pazivumab 100mg/4ml Infusion	115 mg	09/03/2023	09/03/2023	2 vial	FULLY DISPENSED	USER SUPPORT		
	Fluorouracil 1g/20ml Injection	356 mg	09/03/2023	09/03/2023	1 vial	FULLY DISPENSED USER SUPPORT		
	Fluorouracil 1g/20ml Injection	1068 mg	09/03/2023	10/03/2023	4 vial	PARTIALLY DISPENSED USER SUPPORT		
	Oxaliplatin 50mg/10ml Injection	75.65 mg	09/03/2023	09/03/2023	2 EA	FULLY DISPENSED USER SUPPORT		

Figure 5.0-2 Manage Prescription

**STEP 3**

Click on button to view selected patient's prescription

**STEP 4**

Right click on the button and select **Modify** and Modify CDR Order screen will display as Figure 5.0-3

**MODIFY CDR ORDER**

XXXXX XXXX XXX XXXXXXX Mykad Age 23 Years 08 Months 23 Days Gender Male MRN

Address Phone And Email Diagnosis No known Allergies

Height 65 cm Weight 167 kg BMI/BSA 395.3 / 1.74 m<sup>2</sup> (Last Updated : 01/11/2019) Nationality : Warganegara

**CDR REGIMEN DETAILS**

Regimen Code: CDRON0006 Regimen Description: Carboplatin + 5FU + FA

Cycle Start Date: 01/11/2019 Cycle End Date: 21/11/2019 Cycle Duration: 21 Days BSA: 1.74 m<sup>2</sup>

Total Cycle: 6 Cycle No: 1 Calculate Dose Using: Actual Body Weight 167 Kg

**PRESCRIPTION**

Seq No.	Drug/Diluent Name	Order Details	Total Dose	Dose Qty	Order Qty	Drug Info
	Carboplatin 450mg/45ml Injection	300 mg/m <sup>2</sup> , OD (once daily), Day: 2 Schedule	522 mg	52.2 ml	2 vial	
	Dextrose 5% 500ml IV soln			447.8 ml	1 bott	
	Fluorouracil 1g/20ml Injection	500 mg/m <sup>2</sup> , OD (once daily), Day: 1,2 Schedule	870 mg	17.4 ml	2 vial	
	Sodium Chloride 0.9% 500ml, IV soln			982.6 ml	4 bott	
	Fluorouracil 1g/20ml Injection	500 mg/m <sup>2</sup> , OD (once daily), Day: 1,2 Schedule	870 mg	17.4 ml	2 vial	

**Oral/Others Drugs** **Injectable Drugs**

Active Ingredient:

Drug Category:

Dosage:

Total Dose:

Admin Route:

Frequency:

Chemo Day:

Drug Indication:

Dispense Location:

Drug Remarks:

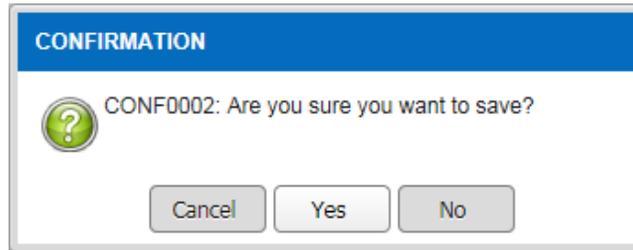
Figure 5.0-3 Modify CDR Order

**STEP 5**

Modify related information

**STEP 6**

Click on the  button to save the modification and Confirmation Message will display as Figure 5.0-4



**Figure 5.0-4 Confirmation Message**

**Note**

- Click on the  button to save
- Click on the  button to close Modify CDR Order screen

**Hold Order**

MRN	Patient Name	IC No/Other Identification				
W90000824884	AXXXX XXXX XXX XXXXXX	0004, Inpatient, WAD 9				
Rx Number	Actual Visit Date	Visit Details				
W90000824884	01/11/2019	0004, Inpatient, WAD 9				
Drug name	Dosage	Start Date	End Date	Order Qty	Order Status	Prescriber Name
Carboplatin 450mg/45ml Injection	522 mg	02/11/2019	02/11/2019	2 vial	ORDERED	
Fluorouracil 1g/20ml Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED	
Hold Fluorouracil 1g/20ml Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED	
Cancel Calcium 50mg/5ml Injection (Folic acid)	348 mg	01/11/2019	02/11/2019	14 vial	ORDERED	

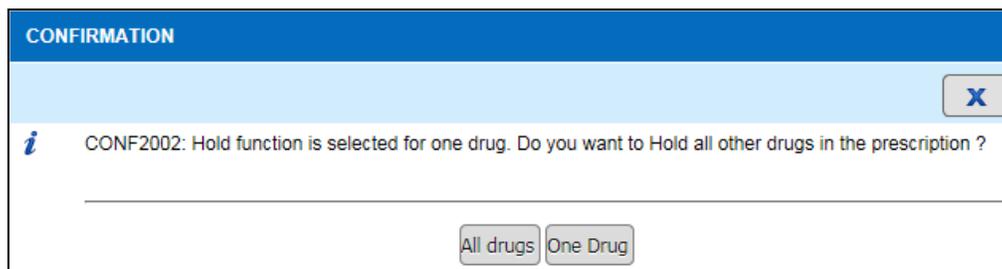
**Figure 5.0-5 Manage Prescription**

**STEP 7**

Click on  button to view selected patient's prescription

**STEP 8**

Right click on the  button and select **Hold** and Confirmation Message will display as Figure 5.0-6



**Figure 5.0-6 Confirmation Message**

**Note**

- Click on the **One Drug** button to hold the selected Drug only
- Click on the **All drugs** button to hold all drug under the patient prescription

**Resume Order**

MRN	Patient Name		IC No/Other Identification			
	AXXXX XXXX XXX XXXXXX					
Rx Number	Actual Visit Date	Visit Details				
W90000824884	01/11/2019	0004, Inpatient, WAD 9				
Drug name	Dosage	Start Date	End Date	Order Qty	Order Status	Prescriber Name
Carboplatin 450mg/45ml Injection	522 mg	02/11/2019	02/11/2019	2 vial	ORDERED	GOBI HARIYANAYAGAM A/L GUNASEKARAN
Fluorouracil 1g Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED HOLD	GOBI HARIYANAYAGAM A/L GUNASEKARAN
Fluorouracil 1g Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED	GOBI HARIYANAYAGAM A/L GUNASEKARAN
Leucovorin Calcium 50mg/5ml Injection (Folinic acid)	348 mg	01/11/2019	02/11/2019	14 vial	ORDERED	GOBI HARIYANAYAGAM A/L GUNASEKARAN

**Figure 5.0-7 Manage Prescription**

**STEP 9**

Click on  button to view selected patient's prescription

**STEP 10**

Right click on the  button with a status of hold and select **Resume** and Confirmation Message will display as Figure 5.0-8

**CONFIRMATION**

 CONF2002: Resume function is selected for one drug. Do you want to Resume all other drugs in the prescription ?

**Figure 5.0-8 Confirmation Message**

**Note**

- Click on the **One Drug** button to resume the selected Drug only
- Click on the **All drugs** button to resume all drug with status hold under the patient prescription

**Cancel Order**

MRN	Patient Name	IC No/Other Identification				
W90000824884	AXXXX XXXX XXX XXXXXX	0004, Inpatient, WAD 9				
Rx Number	Actual Visit Date	Visit Details				
W90000824884	01/11/2019	0004, Inpatient, WAD 9				
Drug name	Dosage	Start Date	End Date	Order Qty	Order Status	Prescriber Name
Carboplatin 450mg/45ml Injection	522 mg	02/11/2019	02/11/2019	2 vial	ORDERED	
Fluorouracil 1g/20ml Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED	
Fluorouracil 1g/20ml Injection	870 mg	01/11/2019	02/11/2019	2 vial	ORDERED	
In Calcium 50mg/5ml Injection (Folinic acid)	348 mg	01/11/2019	02/11/2019	14 vial	ORDERED	

11 12

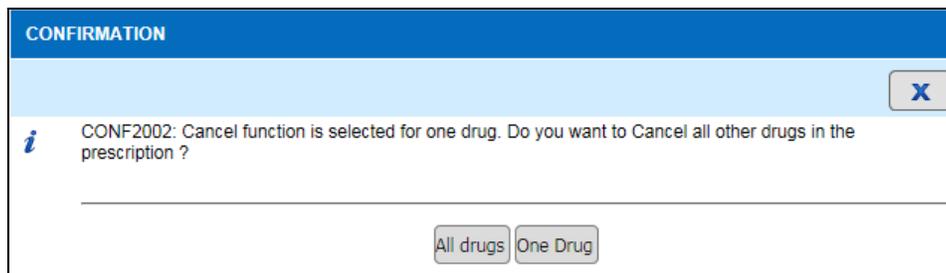
**Figure 5.0-9 Manage Prescription**

**STEP 11**

Click on  button to view selected patient's prescription

**STEP 12**

Right click on the  button and select **Cancel** and Confirmation Message will display as Figure 5.0-10



**Figure 5.0-10 Confirmation Message**

**Note**

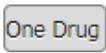
- Click on the  button to cancel the selected Drug only
- Click on the  button to cancel all drug under the patient prescription
- Cancel Reason screen will display as Figure 5.0-11



Figure 5.0-11 Cancel Reason

**STEP 13**

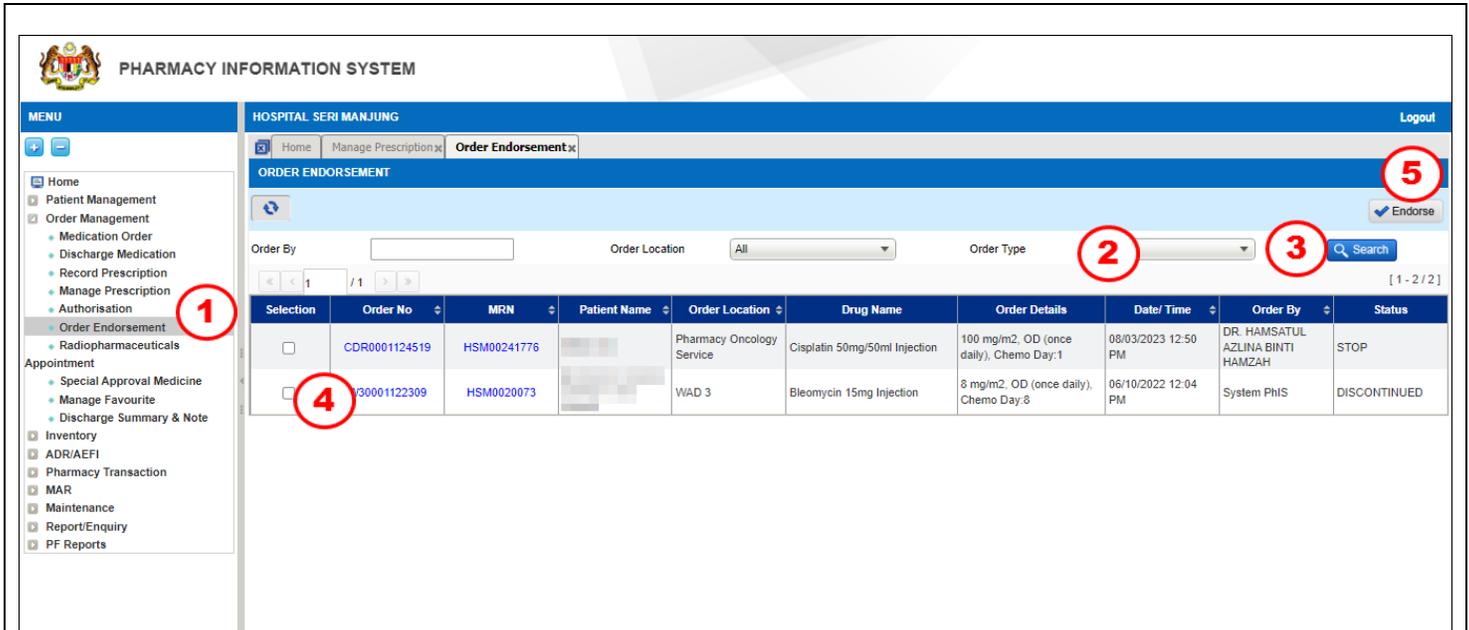
Enter **Cancel Reason** remarks

**STEP 14**

Click on the  Save button to save the record and the drug status will change to Cancelled

## 6.0 Order Endorsement

This function is for pharmacist to endorse CDR order modify by other pharmacist



**PHARMACY INFORMATION SYSTEM**

HOSPITAL SERI MANJUNG Logout

Home Manage Prescription **Order Endorsement**

**ORDER ENDORSEMENT** Endorse

Order By:  Order Location:  All Order Type:   [ 1 - 2 / 2 ]

Selection	Order No	MRN	Patient Name	Order Location	Drug Name	Order Details	Date/Time	Order By	Status
<input type="checkbox"/>	CDR0001124519	HSM00241776	[REDACTED]	Pharmacy Oncology Service	Cisplatin 50mg/50ml Injection	100 mg/m2, OD (once daily), Chemo Day:1	08/03/2023 12:50 PM	DR. HAMSATUL AZLINA BINTI HAMZAH	STOP
<input type="checkbox"/>	030001122309	HSM0020073	[REDACTED]	WAD 3	Bleomycin 15mg Injection	8 mg/m2, OD (once daily), Chemo Day:8	06/10/2022 12:04 PM	System PHIS	DISCONTINUED

Figure 6.0-1 Order Endorsement

### STEP 1

Click on 'Order Management' menu and followed by 'Order Endorsement' sub-menu

#### Note

User may search patient by searching criteria as follow:

- Order By
- Order Location
- Order Type

### STEP 2

Select **Order Type** as **CDR**

### STEP 3

Click on the  button to search patient

### STEP 4

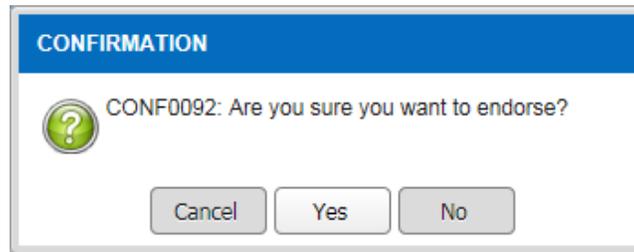
Click on the  checkbox to select patient

#### Note

User is allowed to select multiple patient

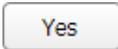
### STEP 5

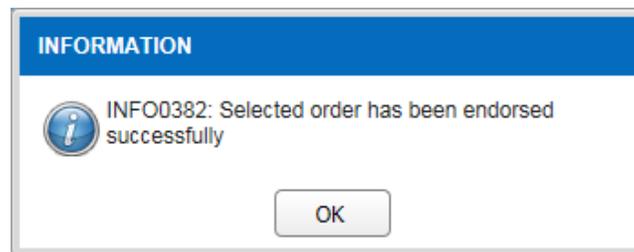
Click on the  button and Confirmation Message will display as Figure 6.0-2



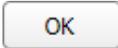
**Figure 6.0-2 Confirmation Message**

**Note**

- Click on the  button and Information Message will display as Figure 6.0-3



**Figure 6.0-3 Information Message**

- Click on the  button to confirm endorsement
- Click on the Order No hyperlink to view Order Details as shown in Figure 6.0-4

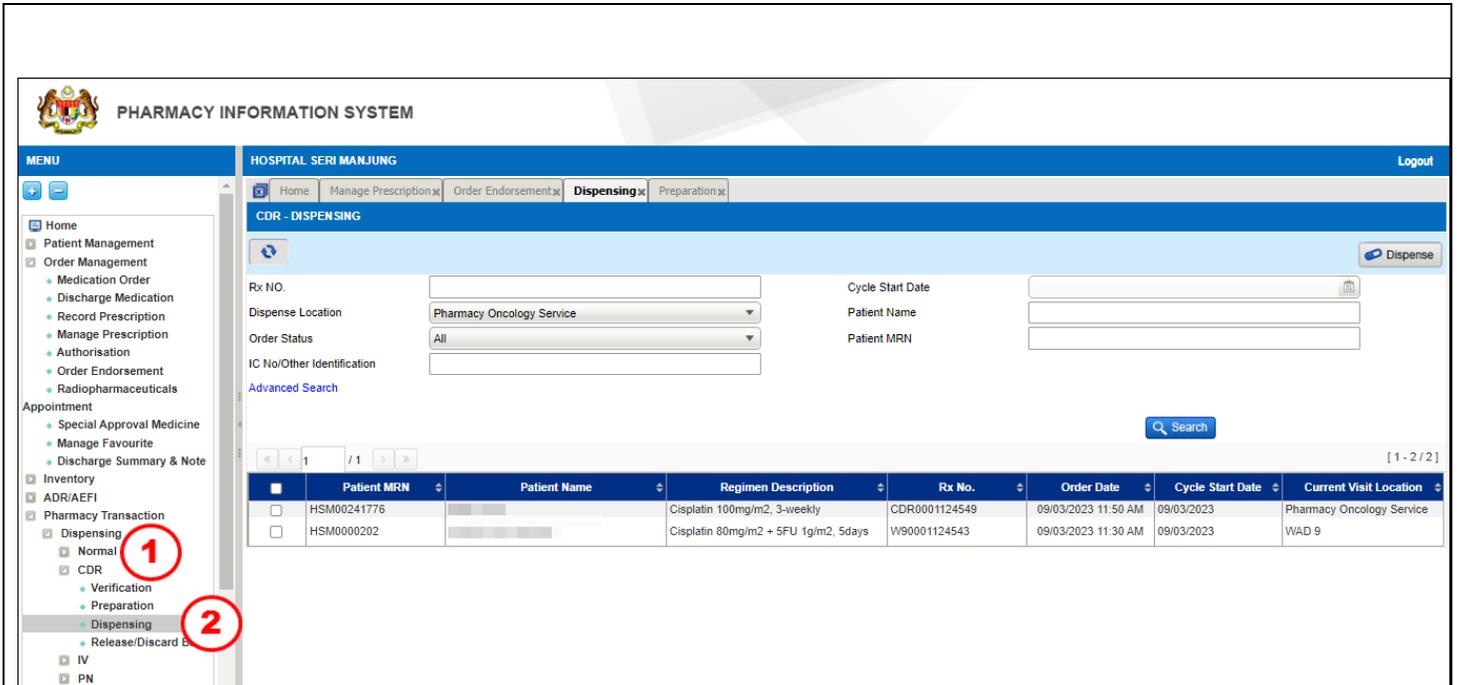
ORDER DETAILS										
X										
REGIMEN DETAILS										
Ordered Cycle Start Date	Modified Cycle Start Date	Ordered Cycle End Date	Modified Cycle End Date							
13/03/2017	-	13/03/2017	-							
DRUG DETAILS										
Drug Name	Ordered Dose	Ordered Frequency	Ordered Infuse Over	Ordered Chemo Day	Ordered Route	Ordered Start Date	End Date	Status	Remarks	Ordered By
Cyclophosphamide 1g/50ml Injection	500 mg	OD (once daily)	2 Hours 0 Minutes	Day: 1	Intravenous Infusion	13/03/2017	13/03/2017	FULLY DISPENSED		
Drug Name	Modified Dose	Modified Frequency	Modified Infuse Over	Modified Chemo Day	Modified Route	Modified Start Date	End Date	Status	Remarks	Modified By
Cyclophosphamide 1g/50ml Injection	300 mg	Single Dose	4 Hours 0 Minutes	-	-	-	13/03/2017	FULLY DISPENSED		
DOSE SCHEDULE										
Chemo Day	Ordered Date	Modified Date								
1	13/03/2017	-								

**Figure 6.0-4 Order Details**

- Drug Details with red colour is the modification made by other pharmacist

## 7.0 CDR Dispensing

This function is for pharmacist and assistant pharmacist to dispense the CDR preparation



**PHARMACY INFORMATION SYSTEM**

HOSPITAL SERI MANJUNG

Logout

Home | Manage Prescription | Order Endorsement | **Dispensing** | Preparation

**CDR - DISPENSING**

Dispense

Rx NO.  Cycle Start Date

Dispense Location  Patient Name

Order Status  Patient MRN

IC No/Other Identification

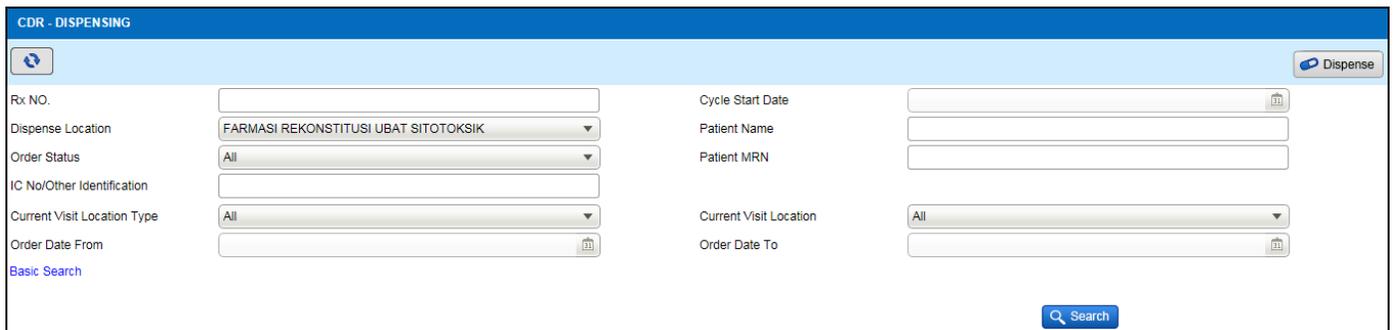
Advanced Search

Search

[ 1 - 2 / 2 ]

	Patient MRN	Patient Name	Regimen Description	Rx No.	Order Date	Cycle Start Date	Current Visit Location
<input type="checkbox"/>	HSM00241776		Cisplatin 100mg/m2, 3-weekly	CDR0001124549	09/03/2023 11:50 AM	09/03/2023	Pharmacy Oncology Service
<input type="checkbox"/>	HSM0000202		Cisplatin 80mg/m2 + 5FU 1g/m2, 5days	W90001124543	09/03/2023 11:30 AM	09/03/2023	WAD 9

Figure 7.0-1 CDR Dispensing Listing Page



**CDR - DISPENSING**

Dispense

Rx NO.  Cycle Start Date

Dispense Location  Patient Name

Order Status  Patient MRN

IC No/Other Identification

Current Visit Location Type  Current Visit Location

Order Date From  Order Date To

Basic Search

Search

Figure 7.0-2 Advance Search

### STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Dispensing' sub menu and select 'CDR'

### STEP 2

Click on 'Dispensing' function

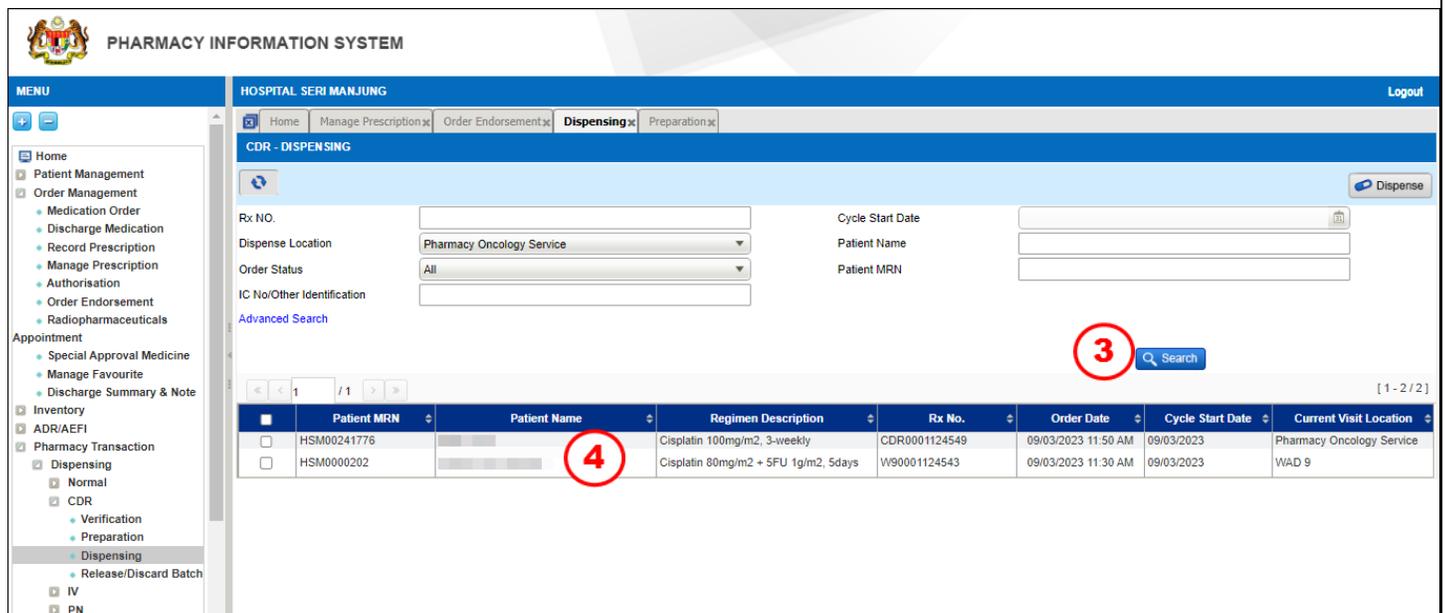
### Note

Search patient records by below criteria:-

Basic Search			
No	Field	Description	Remark
a	Rx NO	Prescription number	Able to filter and search patient name by prescription number
b	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location

c	Order Status	Search by: - All - Prepared - Prepared hold	Able to filter and search patient name by order status
d	Patient Name	Patient Name	Allow to search by full or partially entered patient name
e	Patient MRN	Patient Medical Record Number	Search option: • Type the MRN either in full or partially: <i>Example: HPSF00001234 or "1234"</i>
f	Cycle start date	Cycle start date	Select from the date dropdown box
g	IC Number/Other Identification	Patients Identification number	Able to filter using patients identification number
<b>Advance Search</b>			
a	Current Visit Location Type	Search by: - All - Clinic - Day Care - ER - Nursing Unit - Pharmacy	Able to filter and search patient name by order location type
b	Current Visit Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 7.0-1



**PHARMACY INFORMATION SYSTEM**

HOSPITAL SERI MANJUNG

Logout

Home Manage Prescription Order Endorsement **Dispensing** Preparation

CDR - DISPENSING

Dispense

Rx NO.  Cycle Start Date

Dispense Location **Pharmacy Oncology Service** Patient Name

Order Status **All** Patient MRN

IC No/Other Identification

Advanced Search

**3** Search

[ 1 - 2 / 2 ]

	Patient MRN	Patient Name	Regimen Description	Rx No.	Order Date	Cycle Start Date	Current Visit Location
<input type="checkbox"/>	HSM00241776		Cisplatin 100mg/m2, 3-weekly	CDR0001124549	09/03/2023 11:50 AM	09/03/2023	Pharmacy Oncology Service
<input type="checkbox"/>	HSM0000202		Cisplatin 80mg/m2 + 5FU 1g/m2, 5days	W90001124543	09/03/2023 11:30 AM	09/03/2023	WAD 9

Figure 7.0-3 CDR Dispensing Listing Page

**STEP 3**

Click on Search button  to search for patient

**Note**

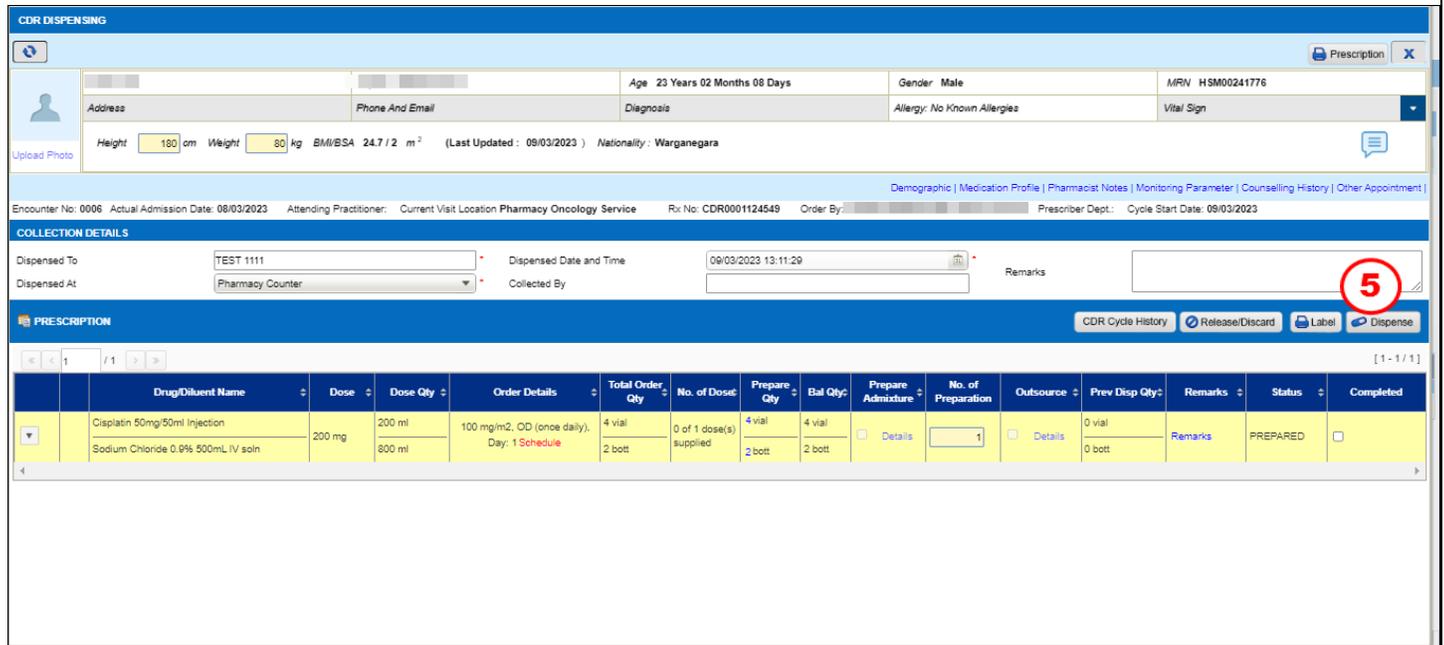
- Search result of patient record list will display:
  - Patient MRN
  - Patient Name
  - Regimen details
  - Rx No
  - Order Date
  - Cycle start date
  - Current Visit Location
- User have the option to dispense the medication by:
  - Dispense individual order
  - Dispense multiple patient order

**Dispense Individual Order:**

To dispense an individual order, perform the steps below:

**STEP 4**

Double click on the selected patient and CDR Dispensing screen will be displayed as shown in Figure 7.0-4



The screenshot shows the 'CDR DISPENSING' interface. At the top, there are navigation buttons for 'Prescription' and 'X'. Below this is a patient information section with fields for Address, Phone And Email, Age (23 Years 02 Months 08 Days), Gender (Male), MRN (HSM00241776), Diagnosis, Allergy (No Known Allergies), and Vital Sign. A 'Height' field is set to 180 cm, 'Weight' to 80 kg, and 'BMI/BSA' to 24.7 / 2 m<sup>2</sup>. Below this is a 'COLLECTION DETAILS' section with fields for 'Dispensed To' (TEST 1111), 'Dispensed Date and Time' (09/03/2023 13:11:29), 'Dispensed At' (Pharmacy Counter), and 'Collected By'. A red circle with the number '5' is around the 'Remarks' field. Below this is a 'PRESCRIPTION' section with buttons for 'CDR Cycle History', 'Release/Discard', 'Label', and 'Dispense'. A table lists the prescription items:

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose(s) supplied	Prepare Qty	Bal Qty	Prepare Admixture	No. of Preparation	Outsource	Prev Disp Qty	Remarks	Status	Completed
Cisplatin 50mg/50ml Injection	200 mg	200 ml	100 mg/m <sup>2</sup> , OD (once daily), Day: 1 Schedule	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input type="checkbox"/> Details	1	<input type="checkbox"/> Details	0 vial	Remarks	PREPARED	<input type="checkbox"/>
Sodium Chloride 0.9% 500mL IV soln		800 ml		2 bott		2 bott	2 bott				0 bott			

Figure 7.0-4 CDR Dispensing

**Note**

User is allowed to click on the Completed  checkbox in the Prescription section to complete the drug

**STEP 5**

Click on the  button to dispense the medication and Confirmation Message window will be displayed as shown in Figure 7.0-5

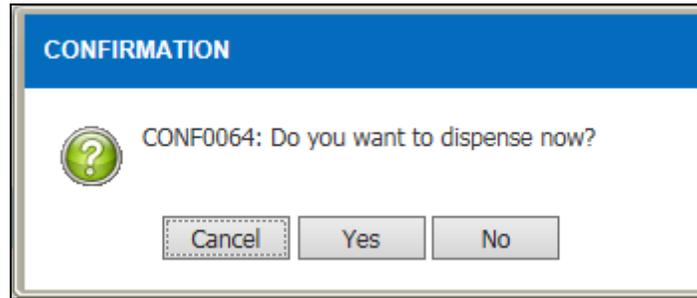


Figure 7.0-5 Confirmation Message

**Note**

- Click on the  button to confirm the dispensing.
- Click on the  button to cancel the dispensing.

**Dispense Multiple Patient Order:**

To dispense a multiple patient order, perform the steps below:

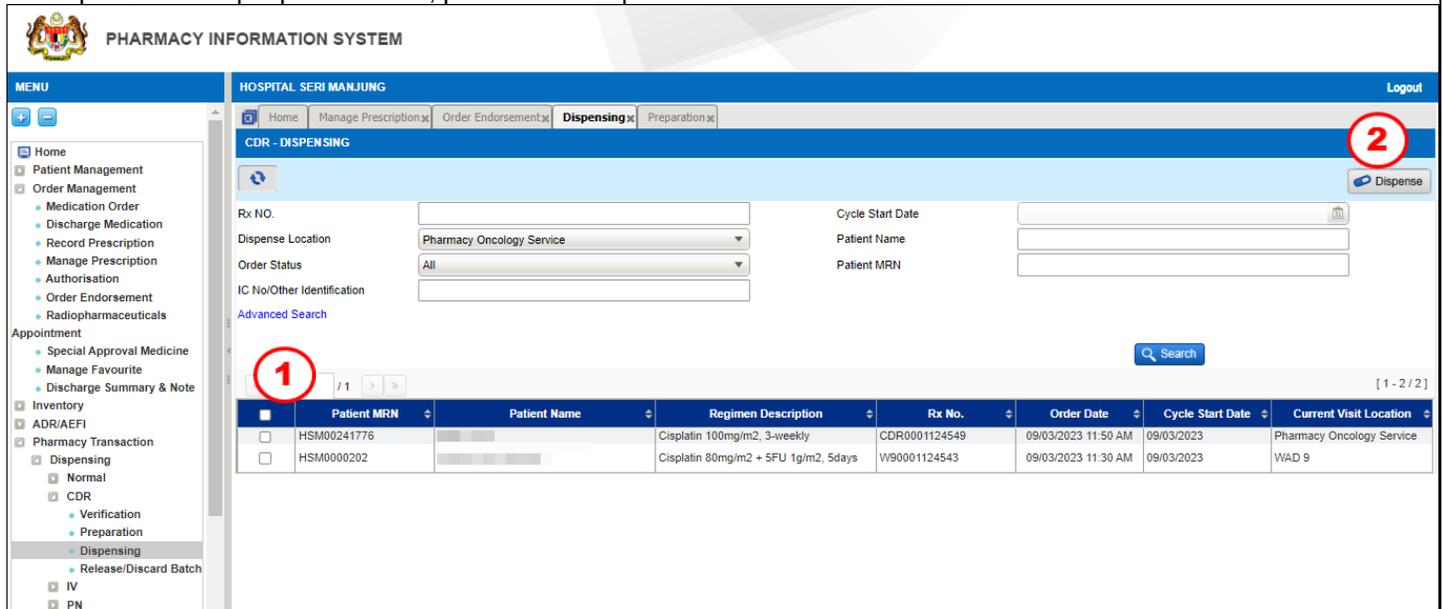


Figure 7.0-6 CDR Dispensing Listing Page

**STEP 1**

Click on the selected  Patient MRN checkbox from the patient list

**STEP 2**

Click on the  button to dispense the medication and Collection Details windows will displayed as Figure 7.0-7

**Note**

Allocated stocks are based on dispensing location instead of login location selected by user.

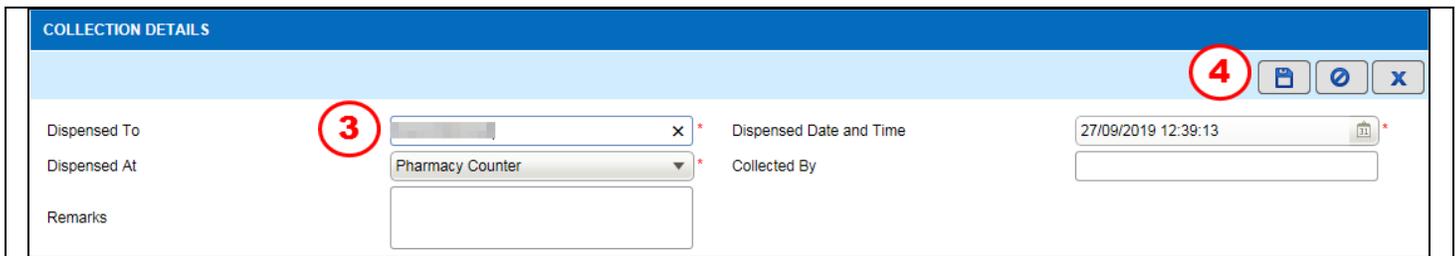


Figure 7.0-7 Collection Details

**STEP 3**

Enter *Dispensed To*

**STEP 4**

Click on the  button to save the record and Confirmation Message screen will be displayed as Figure 7.0-8

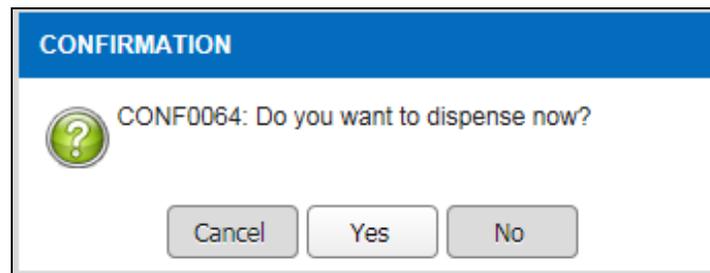
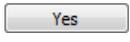
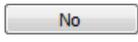


Figure 7.0-8 Confirmation Message

**Note**

- Click on the  button to confirm the dispensing.
- Click on the  button to cancel the dispensing.

## 8.0 Release/Discard Batch

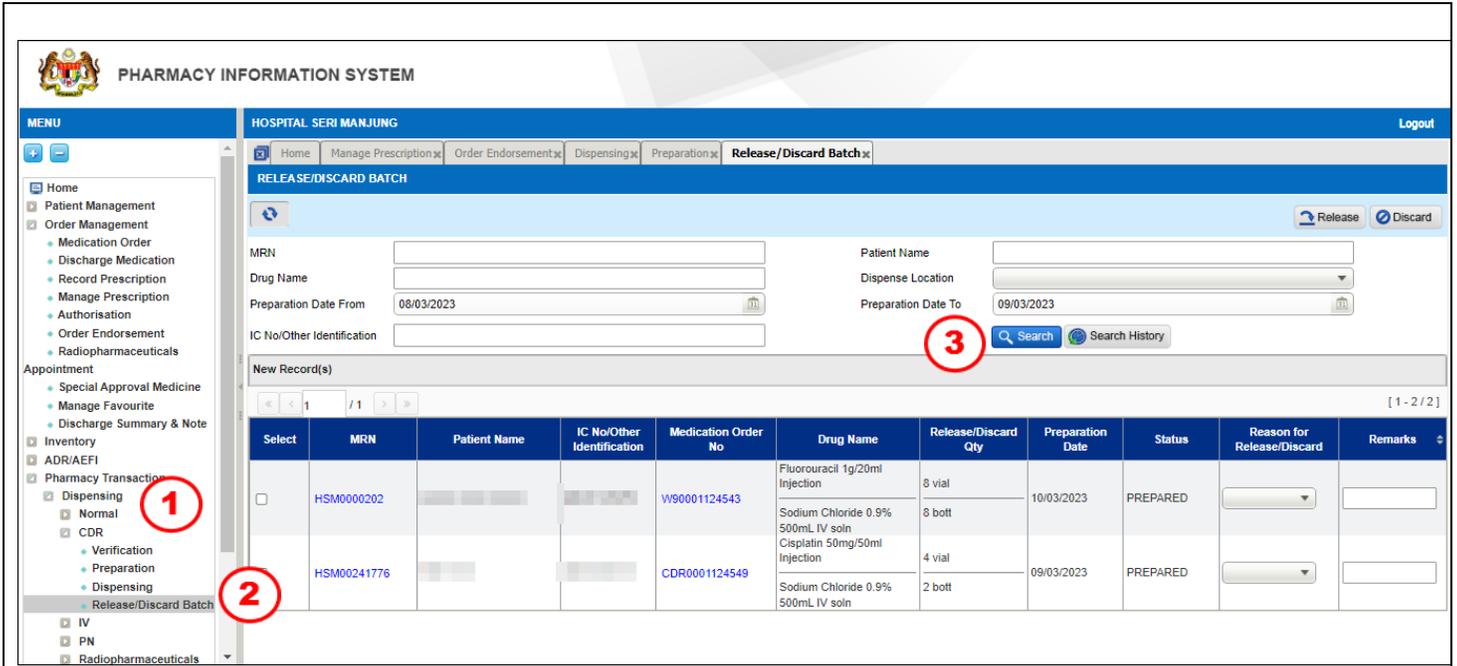


Figure 8.0-1 Release/Discard Batch Listing Page

### STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Dispensing' sub menu and select 'CDR'

### STEP 2

Click on 'Release/Discard Batch'

### Note

Search patient records by below criteria:-

No	Field	Description	Remark
A	MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> <li>Type the MRN either in full or partially:  <i>Example: HPSF00001234 or "1234"</i> </li> </ul>
B	Patient Name	Patient Name	Allow to search by full or partial patient name
C	Drug Name	Drug Name	Allow to search by full or partial drug name
D	Dispense Location	Dispensing location. (It will list down all active locations)	Able to filter and search patient name by dispensing location
E	IC Number/Other Identification	Patients Identification number	Able to filter using patients identification number
F	Prepared Date From	Date range of preparation	Able to search by preparation date
G	Prepared Date To	Date range of preparation	Able to search by preparation date

Table 8.0-1

**STEP 3**

Click on the  button to search for patient

**Note**

- Search results of patient record list will display:
  - MRN
  - Patient Name
  - Drug Name
  - Medication Order No
  - Preparation Date
  - IC number
  - Prepared Qty
  - Status
  - Reason for Release/Discard
  - Remarks
- Click on the **Medication Order No** hyperlink to view Order Details for the selected patient.

ORDER DETAILS												
	Mykad	Age 21 Years 05 Months 27 Days	Gender Male	MRN								
Address	Phone And Email	Diagnosis	No known Allergies									
Height 49.9 cm	Weight 168 kg	BMI/BSA 674.7 / 1.53 m <sup>2</sup>	(Last Updated : 28/02/2019 )			Nationality : Warganegara						
Rx No	RT4AB0000734239	Order Type	CDR		Order By	Dr MO Radioterapi & Onkologi						
Order Date	28/02/2019 03:36 PM	Order Location	Wad Onkologi 4AB									
Category	Oncology - -	Regimen Code	CDRON00172		Regimen Description	FOLFOX - Bevacizumab						
Cycle Duration	14	Cycle No	4		Cycle Start Date	28/02/2019	Cycle End Date	13/03/2019				
Remarks												
Active Ingredient	Default Drug Name	Admin Route	Dosage	Total Dose	Infuse Over	Frequency	Chemo day	Diluent	Diluent Volume	Total Volume	Infusion Rate	Drug Remark
Calcium Folate (Leucovorin calcium)	Leucovorin Calcium 50mg/5ml Injection (Folinic acid)	Intravenous Bolus	200 mg/m <sup>2</sup>	305 mg	2 Hours 0 Minutes	OD (once daily)	Day: 1			30.5 ml	125 ml/Hour	

**Figure 8.0-2 Order Details**

- Click on the **MRN** hyperlink to view Medication Profile for the selected patient.



**MEDICATION PROFILE**

Age 49 Years 09 Months 02 Days    Gender Female    MRN HSM0227358

Address    Phone And Email    Diagnosis    Allergy: No Known Allergies    Vital Sign

Height 159.5 cm    Weight 83 kg    BMI/BSA 32.6 / 1.92 m<sup>2</sup>    (Last Updated : 03/06/2020 )    Nationality : Warganegara

Drug Name    Visit Type All

Prescription Date From    Prescription Date To

Prescription Status    Location All

Prescription Number

[Search](#)

**NORMAL MEDICATION**

**CDR DRUG LIST**

[CDR Cycle History](#)

Current Medication

Rx No.	Regimen Code	Dosage Form	Drug Name	Dose	Route	Frequency	Status	Order By	Prescribed Qty	Visit Type	Cycle Start Date
W60001062810	CDRON00180	Parenteral Solution	Epirubicin 50mg/25ml Injection	146.25 mg	IV Slow Bolus	OD (once daily)	FULLY DISPENSED		3	Inpatient	18/02/2020

Previous Medication

Rx No.	Regimen Code	Dosage Form	Drug Name	Dose	Route	Frequency	Status	Order By	Prescribed Qty	Visit Type	Cycle Start Date
W60001062810	CDRON00180	Parenteral Solution	Epirubicin 50mg/25ml Injection	146.25 mg	IV Slow Bolus	OD (once daily)	FULLY DISPENSED		3	Inpatient	18/02/2020

Figure 8.0-3 Medication Profile

- Click on the [Search History](#) button to view release/discard history.

**PHARMACY INFORMATION SYSTEM**

HOSPITAL SERI MANJUNG    Logout

Home    Release/Discard Batch

**RELEASE/DISCARD BATCH**

[Release](#)    [Discard](#)

MRN    Patient Name

Drug Name    Dispense Location

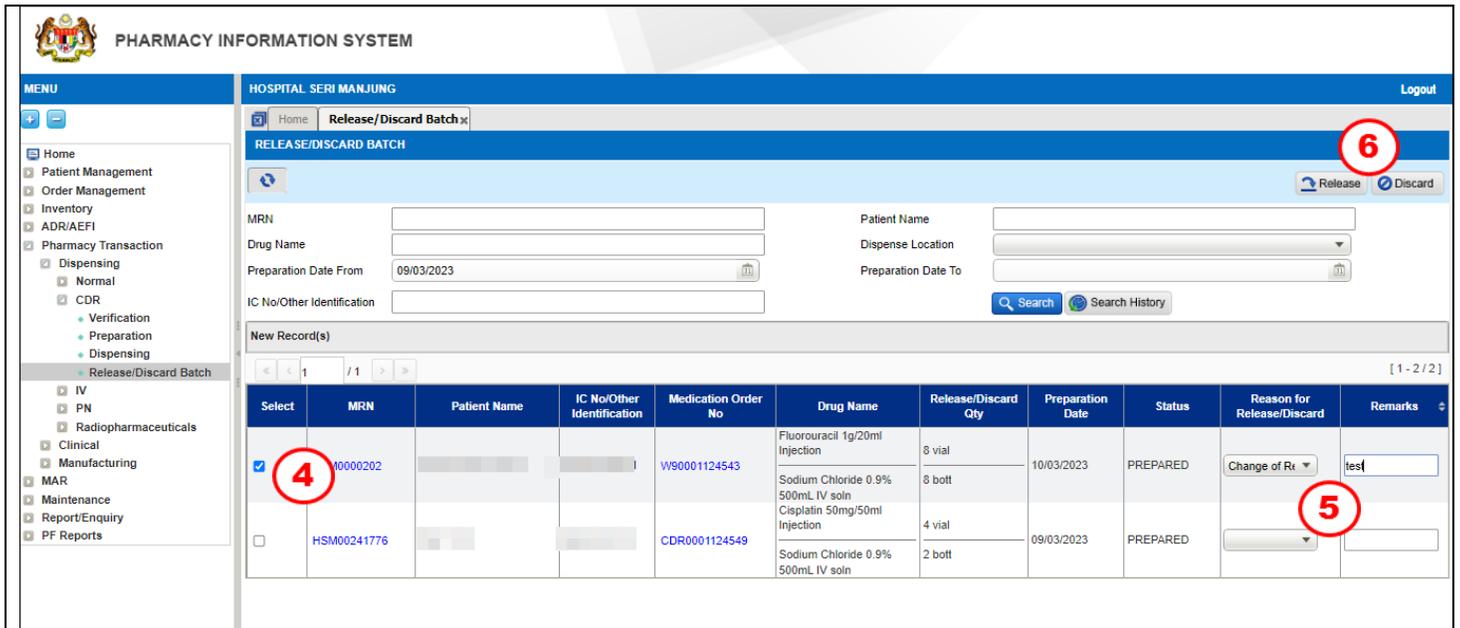
Preparation Date From 09/03/2023    Preparation Date To

IC No/Other Identification    [Search](#)    [Search History](#)

History Record(s)

MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Release/Discard Qty	Preparation Date	Status	Reason for Release/Discard	Remarks
HSM0000202			W90001124543	Fluorouracil 1g/20ml Injection	8 vial	09/03/2023		Change of Regimen	test
				Sodium Chloride 0.9% 500mL IV soln	8 bott				

Figure 8.0-4 Release/Discard Batch History



**PHARMACY INFORMATION SYSTEM**

HOSPITAL SERI MANJUNG

Home | Release/Discard Batch

Release/Discard Batch

MRN:  Patient Name:

Drug Name:  Dispense Location:

Preparation Date From: 09/03/2023 Preparation Date To:

IC No/Other Identification:

Search Search History

New Record(s) [1 - 2 / 2]

Select	MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Release/Discard Qty	Preparation Date	Status	Reason for Release/Discard	Remarks
<input checked="" type="checkbox"/>	0000202			W90001124543	Fluorouracil 1g/20ml Injection	8 vial	10/03/2023	PREPARED	Change of Re	tes
<input type="checkbox"/>	HSM00241776			CDR0001124549	Sodium Chloride 0.9% 500mL IV soln	8 bott				
<input type="checkbox"/>					Cisplatin 50mg/50ml Injection	4 vial				
<input type="checkbox"/>					Sodium Chloride 0.9% 500mL IV soln	2 bott	09/03/2023	PREPARED		

Figure 8.0-5 Release/Discard Batch Listing Page

**STEP 4**

Click on the selected drug  checkbox

**STEP 5**

Select **Reason for Discard** from dropdown box

- Change of Regimen
- Faulty Product
- Intervention
- Patient Refused
- Uncollected
- Wrong Allocation

**STEP 6**

Click on the  button to proceed release

Click on the  button to proceed discard

**Note**

When user click on the release function, the stock allocated for the regimen will be release back to inventory and if user click on discard function, system will discard the stock allocated for the regimen from inventory.



## 9.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
MOH	Ministry Of Health
HQ	Headquarters
CDR	Cytotoxic Drug Reconstitution

## 10.0 Links to Clinical Modules

No	Module	PDF Links	No	Module	PDF Links
1	Inpatient	<a href="#">Click Here</a>	12	CDR Dispensing	<a href="#">Click Here</a>
2	CDR Order	<a href="#">Click Here</a>	13	Methadone Dispensing	<a href="#">Click Here</a>
3	TDM Order	<a href="#">Click Here</a>	14	PN Dispensing	<a href="#">Click Here</a>
4	PN Order	<a href="#">Click Here</a>	15	Order Management	<a href="#">Click Here</a>
5	IV Order	<a href="#">Click Here</a>	16	Patient Management	<a href="#">Click Here</a>
6	Prepacking	<a href="#">Click Here</a>	17	Radiopharmaceuticals	<a href="#">Click Here</a>
7	Galenical	<a href="#">Click Here</a>	18	Outpatient	<a href="#">Click Here</a>
8	MTAC	<a href="#">Click Here</a>	19	Special Drug Request	<a href="#">Click Here</a>
9	ADR & DAC	<a href="#">Click Here</a>	20	MAR	<a href="#">Click Here</a>
10	Medication Counselling	<a href="#">Click Here</a>	21	DICE	<a href="#">Click Here</a>
11	Ward Pharmacy	<a href="#">Click Here</a>	22		