

NCIS GUIDE

on Complexity Bands in NCIS.Med

1. Background

The NCCP have published a Capacity Planning Toolkit for parenteral SACT compounding and dispensing in hospital pharmacy departments. As part of this toolkit, a Complexity Band may be applied to each product manufactured in the aseptic compounding unit as well as all products that have been outsourced. Complexity Bands from 0-5 and the timings associated with each Complexity Band have been based on a consensus from the working group benchmarked to international practice.

In NCIS, Complexity Bands are managed via the “additional articles and services” functionality. Complexity Bands are built either at drug or regimen level depending on whether multiple presentations of the dosage form exist (i.e. syringe, infusion, infusor).

This quick guide explains how to use Complexity Bands in NCIS and reporting options for Complexity Bands.

2. Associated documentation

- NCCP Parenteral SACT Capacity Planning Toolkit Implementation Document Version 1 07/06/2017
- NCCP Parenteral SACT Capacity Planning Toolkit User Manual Version 1 07/06/2017

3. Complexity Bands built into NCIS

The NCIS Office has built Complexity Bands in the drug file, and into NCCP regimens where more than one complexity band exists for a drug. For example, fluorouracil:

- Complexity Band 1 built for fluorouracil prepared in ACU as bolus (*drug file*)
- Complexity Band 5 built for fluorouracil prepared in ACU as infusor (*regimen*)

Products in the drug file for out-sourced pathways are set up with a Complexity Band of 0:

- Products with “(out-sourced)” included in the product name e.g. CARBOplatin (out-sourced)
- Dose banded products e.g. CARBOplatin IV Infusion (DB) in 250mL Glucose 5%

4. Lot management of Complexity Bands

Complexity Bands in NCIS are set up via the “additional articles and services” functionality. Two lots are set up for each Complexity Band:

1. USE THIS BAND, expiry 31/12/2098
2. IGNORE THIS BAND, expiry 31/12/2099

These lots are set up by the NCIS Office in advance of go-live. Lot deduction has been turned off for complexity bands. **Therefore, lot management is a once-off set-up by the NCIS Office and no action is required by hospital users for lot management.**

5. Using Complexity Bands in NCIS

Scenario 1: one Complexity Band built for product

The majority of products will only have one Complexity Band built at drug file level, as they only have one final presentation e.g. CISplatin infusion. For these products, the functionality has been set up for the Complexity Bands to automatically populate.

Create/edit parts list		
Planned preparation time: 25/08/2020 14:13 Preparation method: Volumetric		
Products		
CISplatin 1mg/mL Teva Concentrate for solution for infusion: 175mg Remainder: 29mg	2x 100mg (23626262)	100mg 2x
Total syringes		
5x Luer Lok Syringe 50mL polypropylene		
Containers and additional articles (per medication)		
Med.# 25114, QURESHI MARY, Patient no.: 518032, for Tue, 25/08/2020 08:00 (TRN - Training Day Ward)		1x NaCl 0.9% 1000mL Vialflo bag non-PVC Baxter (HUIW88) 2x Light Protection
CISplatin 1mg/mL Teva Concentrate for solution for infusion 175mg in 1000mL NaCl 0.9% by intravenous infusion		1x Complexity Band 2 (1 USE THIS BAND) (*)

Figure 1: Parts list for product with one Complexity Band (lot "1 USE THIS BAND" auto-selected)

Scenario 2: two Complexity Bands built for product

In some cases, two Complexity Bands will be pulled through to the parts list and the user can select the appropriate lots for that preparation. For example, fluorouracil may be prepared as a bolus, an infusion or an infusor, with different Complexity Bands assigned to each preparation type. One Complexity Band will be pulled through from the drug file, while another Complexity Band will be pulled through from the NCIS regimen.

Create/edit parts list		
Planned preparation time: 25/08/2020 14:31 Preparation method: Volumetric		
Products		
Fluorouracil 50 mg/mL Accord Solution for injection/infusion: 4200mg Remainder: 800mg	2x 2500mg (23626266)	2500mg 2x
Total syringes		
2x Luer Lok Syringe 50mL polypropylene		
Containers and additional articles (per medication)		
Med.# 25136, QURESHI MARY, Patient no.: 518032, for Tue, 25/08/2020 10:40 (TRN - Training Day Ward)		1x NaCl 0.9% 50mL Freeflex bag non-PVC Fresenius Kabi 1x SV2.5 Infusor 120mL elastomeric
Fluorouracil 50 mg/mL Accord Solution for injection/infusion 4200mg q.s. to 115mL NaCl 0.9% SV2.5 Infusor 120mL elastomeric, by intravenous infusion		1 (1 USE THIS BAND) (*), 1x Complexity Band 5 (1 USE THIS BAND)
		1x Complexity Band

Figure 2: Two Complexity Bands pulled through to parts list

The user can then select the appropriate lots. In the above example, fluorouracil is being prepared as an infusor, so the appropriate band is "Complexity Band 5."

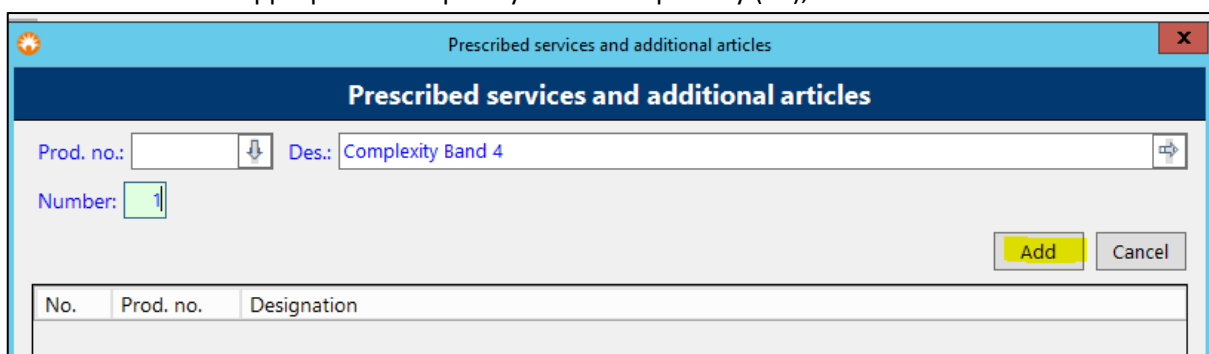
Med.# 25136, QURESHI MARY, Patient no.: 518032, for Tue, 25/08/2020 10:40 (TRN - Training Day Ward)		
Fluorouracil 50 mg/mL Accord Solution for injection/infusion 4200mg q.s. to 115mL NaCl 0.9%, SV2.5 Infusor 120mL elastomeric, by intravenous infusion		
Vehicle q.s. to 31mL NaCl 0.9% from		
1 pc.	50mL Freeflex bag non-PVC Fresenius Kabi	Lot #:
Empty container		
1 pc.	SV2.5 Infusor 120mL elastomeric	Lot #:
Additional articles and services		
1 pc.	Complexity Band 1	Lot #: 2 IGNORE THIS BAND, expiring on 31/12/2099
1 pc.	Complexity Band 5	Lot #: 1 USE THIS BAND, expiring on 31/12/2098

Figure 3: User selects appropriate lots for both Complexity Bands

6. Adding or editing a Complexity Band

It is possible to add Complexity Bands in the pharmacist verification screens, or to edit Complexity Bands which have been pulled through from the NCIS regimen. This functionality could be used if the local hospital wished to assign a different Complexity Band, on a case-by-case basis, to that which has been pre-entered in the NCIS drug file and/or NCIS regimen, or if a medication has been added as an ad-hoc planned medication to a therapy plan.

To add a Complexity Band, click on *Insert services/additional articles* within the pharmacist verification screen and add the appropriate Complexity Band and quantity (=1), then click add.



No.	Prod. no.	Designation

Figure 4: Adding a Complexity Band at pharmacist verification

7. Reporting on complexity bands in NCIS

NCIS.Med provides a number of reporting options. The Cost Centre Accounting report provides a flexible reporting solution, which could be used to report on Complexity Bands within a defined time period.

The below example from the Training Environment shows how this report can be used to retrieve information on Complexity Bands, on the proviso that the lots for Complexity Bands have been correctly selected within the parts list.

Figure 5 shows the fields that were ticked to retrieve the information shown in Figure 6. The field *Display pharmaceutical services and products* should be ticked to show the Complexity Bands. The report can be filtered to include main medications only, and ticking *Pieces*, displays the numbers of each Complexity Band used within the time period.

Cost center accounting

Period

☒ Dispense date / Preparation date ☐ Date of administration

Period: Last month (from 01/07/2022 to 31/07/2022)

Breakdown

Center / unit Display individual medications: List

Limitation

(No filter condition)

Preparation site: TRAIN

☐ Display vehicle

☐ Display empty containers

☐ Display medical services

☒ Display pharmaceutical services and products

☐ Display preparation flat rates saved for medications

Calculation options

☐ Consider / calculate losses

☐ Preparation flat rate

☐ Add sales tax/VAT

☐ Cap mg/mL (ignore overfill)

Medication filter

☒ Main medications

☐ Co-medications

☐ Infusion solutions

☐ TPN medications

Prepared and dispensed

Column options

☐ mg / mL ☐ Share of total consumption

☒ Pieces ☐ Display numbers

☐ Costs ☐ Display case numbers

☐ Loss in separate column ☐ Display UIDs

☐ Line total Without lot numbers

☐ Display manufacturer ☐ Display SSN

Figure 5: Sample Cost Centre Accounting report for reporting on Complexity Bands

Cost center accounting: Dispense date / Preparation date from 01/07/2022 to 31/07/2022

Training Hospital

TRN - Training Consultant

Med. no. 144387: 650mg Fluorouracil (outsourced) - Bolus by intravenous injection over 30 min
 Med. no. 144876: 1000mg Endoxana 20mg/mL Powder for solution for injection in 250mL NaCl 0.9% 250mL bag Vialto - No Overfill - non-PVC Baxt
 Med. no. 146074: Oxaliplatin IV Infusion (DB) in 500mL Glucose 5% (Division: 1 x 150mg) by intravenous infusion over 120 min
 Med. no. 146108: Oxaliplatin IV Infusion (DB) in 500mL Glucose 5% (Division: 1 x 150mg) by intravenous infusion over 120 min
 Med. no. 146112: 150mg Oxaliplatin 5 mg/mL Accord Concentrate for solution for infusion in 500mL Glucose 5% 500mL bag Vialto - No Overfill - no
 Med. no. 146710: Oxaliplatin IV Infusion (DB) in 500mL Glucose 5% (Division: 1 x 150mg) by intravenous infusion over 120 min
 Med. no. 147286: 750mg Fluorouracil 25 mg/mL Hospira Solution for injection/infusion Bolus by intravenous injection over 30 min

Additional article/service	U/P	Consumption Piece/s
Complexity Band 0	0.00	4.00
Complexity Band 1	0.00	1.00
Complexity Band 2	0.00	1.00
Complexity Band 3	0.00	1.00

Figure 6: Sample report generated based on the parameters ticked in Figure 5