

MITRE / FLUX NOTES **SELECTED CONCEPTS v14.4**

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The following concepts explore the data capture driven templates and their interactions.

I

PRINCIPLES FOR DATA CAPTURE BASED TEMPLATES

TEMPLATES FOR DIRECT DATA CAPTURE

The goal of this feature is to use the clinician's knowledge or expectations of an upcoming encounter to prepare the system for easy data capture and note generation. There are two main components to the feature. Before the encounter, the clinician identifies a small set of data that they expect to capture by choosing or editing then using a template that includes "unknown" elements. Then during the encounter, those targeted elements are filled in using a convenient and accessible Point-of-Sale interface. In the future voice-first interaction, the narrow set of unknown values assists the NLP and voice-recognition software to identify relevant data.

Next Step Capabilities

- Include and identify expected data in template and note
 - Ability to identify expected categories, such as "grade" or "reason"
 - Ability to specify a label or prompt for the POS
 - Default Values
- Placeholder elements are translated into clickable Point-of-Sale interface for in-encounter data capture
- Supports expected data within templates and within pre-encounter note editing
 - GUI for note editing
- Pre-made template demonstrating specific data capture placeholders for oncology

Considerations & Limitations

- Placeholder elements should have textual representation in note as well as a graphical representation.
- Very limited training time, but it is worth showing off the capability of easy template editing.
- During-encounter view should keep eyes off the note.
- POS design should not overwhelm clinician with too many checkboxes etc.

Additional Future Data-Capture Capabilities

- Variable capture, e.g. capturing arbitrary number of toxicities
- Capture non-structured or unexpected data. Such as via voice memo, or a "capture last sentence" feature
- Default POS elements to last value in record
- Logical building blocks
 - if-then logic to determine required data or next prompts
 - if-then logic to determine narrative text in note
- Default values for things like a full ROS (most entries are negative)

Additional Templating Features

- Management
 - saving/updating to user or to patient
 - tiers of specificity
 - tagging
 - searching
 - sharing & publishing
- template vs. snippets
 - templates are large, specialized, and initialize a note
 - snippets are small and potentially context based (like HPI)
- Ability to insert placeholders for capture of structured & unstructured data
- Template placeholders can be for multiple levels of description: data element or attribute
- Lists and iterations for data retrieval
 - Filtering
 - Sorting
- Graphical interface with building blocks

Increasing granularity of template



Primary note types

Progress note
Op note
Consult note
etc...

Primary note types for a specific cohort...

Progress note
For condition A
For condition B
For condition etc...
For patient cohort A
For patient cohort B
For patient cohort etc...
Op note
Consult note
etc...

Specific patient templates...

Progress note
For condition A
For patient A
For patient B
For patient etc...
For condition B
For condition etc...
For patient cohort A
For patient cohort B
For patient cohort etc...
Op note
Consult note
etc...



Flux Notes demonstration
template for data capture
lives at this level of granularity

2 DATA CAPTURE BASED ON TEMPLATES

HISTORY OF PRESENT ILLNESS

Here is the full history of present illness for invasive ductal carcinoma of the breast, with all the structured data. Structured data to capture: #staging. Other structured data to capture, #disease status.
Additional structured data to capture, #toxicity.
Additional structured data, #HER2.
Placeholder fields for structured data like #ER, #PR can be filled via template POS.

Gray text, or some other form of visual indication shows that it is a data placeholder field generated from the template.



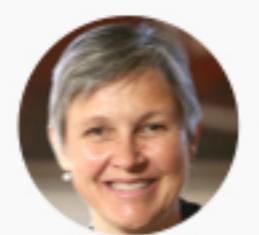
Order of predicted workflow:

- Browse notes, create new note
- Capture data for template placeholders
- Shortcuts for finishing documentation
- POS note assistant for any remaining items
- Summary of structured data captured during the visit (alluding to data receipt)

View



Collaborative view toggle



Debra24
Hernandez98Aj

Date of birth
5 Apr 1966 (51)

Admin. sex
Female

Location
Boston, MA

Condition

Ductal carcinoma of the breast

View



Debra24 search...



Dr. Jraker299 referred ms. Debra24 Hernandez98Aj due to pain in left breast. Dr. Jraker299 is ms. Debra24 Hernandez98Aj's primary care physician for 12 years.

Summary

Timeline

Medication

Allergies

Labs

Social

Disease status



Summary

Ms. Debra24 Hernandez98Aj is a 51-year-old menopausal non hispanic or latino woman with invasive ductal carcinoma of the breast, diagnosed on 13 January 2012. Her most recent status, recorded on 15 May 2017, is of worsening, disease progression based on pathology, imaging, and symptoms.

She underwent a lumpectomy. She underwent a sentinel lymph node biopsy on 20 September 2012 which revealed infiltrating poorly differentiated ductal carcinoma, stage IV, estrogen receptor 0, etc.

diagnostic mammogram on 4 October 2013 revealed a 2 cm mass in the right breast at 7 o'clock and an

New note

10 April 2018

Dr. Free2 Will

Dana Farber Cancer Institute



Ductal carcinoma of the breast

REASON FOR VISIT

Follow-up consultation regarding a procedure related to Invasive ductal carcinoma of the breast.

HISTORY OF PRESENT ILLNESS

Here is the full history of present illness for invasive ductal carcinoma of the breast, with all the structured data. Structured data to capture: #staging. Other structured data to capture, #disease status.

Additional structured data to capture, #toxicity.

Additional structured data, #HER2.

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REVIEW OF SYSTEMS

Review of systems text.

ALLERGIES

Allergies text.

MEDICATIONS

Allergies text.

PHYSICAL EXAM

Physical exam text.

ASSESSMENT

Assessment text. Patients blood pressure is an example of capturing a value #blood pressure

Remove unfilled elements and sign



Search shortcuts

Templates
Shortcuts

Patient
@patient
@age
@gender
@dateofbirth
@name
...

Remove note


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Progress note
10 April 2018

Dr. Free2 Will
Dana Farber Cancer Institute

✖ Close


#Staging Tumor size

Tis	T0	T1	T2	T3	T4
-----	----	----	----	----	----

#Disease status Status

Complete response	Complete resection	Responding	Stable	Progressing	Inevaluable
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#toxicity Grade

Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
---------	---------	---------	---------	---------

#HER2 Receptor

Positive	Negative
----------	----------

#ER Receptor

Positive	Negative
----------	----------

#PR Receptor

Positive	Negative
----------	----------

#enrollment Clinical trial

PATINA	PALLAS	title
--------	--------	-------

#unenrollment Clinical trial

PATINA	PALLAS	title
--------	--------	-------

#blood pressure Pressure

Systolic / Diastolic

#data element Clinical trial

PATINA	PALLAS	title
--------	--------	-------

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Timeline

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Medication

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Allergies

Labs

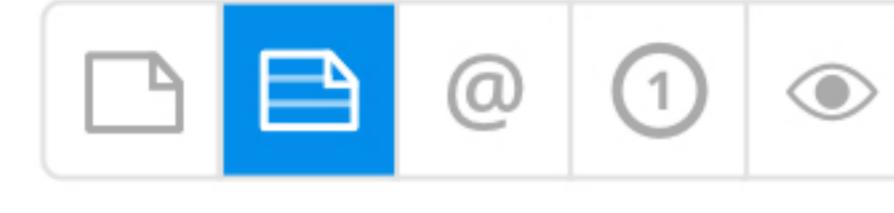
Social

Disease status

Progress note
10 April 2018

Dr. Free2 Will
Dana Farber Cancer Institute

Close



#Staging
IIIA

Tumor size

Tis

T0

T1

T2

T3

T4

Node size

N0

N1mi

N1

N2

N3

Metastasis

M0

M1

#Disease status

Status

Complete response

Complete resection

Responding

Stable

Progressing

Inevaluable

#toxicity

Grade

Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

#HER2

Receptor

Positive

Negative

#ER

Receptor

Positive

Negative

#PR

Receptor

Positive

Negative

#blood pressure

Pressure

Systolic / Diastolic

#data element

Clinical trial

PATINA

PALLAS

title



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Close



#Staging
IIIA

Tumor size

Tis

T0

T1

T2

T3

T4

#Disease status
Stable Imaging

Status

Complete response

Complete resection

Responding

Stable

Progressing

Inevaluable

#toxicity

Grade 3 Anemia

Grade

Grade 1

Grade 2

Grade 3

Grade 4

Grade 5

#HER2
Positive

Receptor

Positive

Negative

#ER
Negative

Receptor

Positive

Negative

#PR
Negative

Receptor

Positive

Negative

#enrollment
PATINA

Clinical trial

PATINA

PALLAS

title

#unenrollment

Clinical trial

PATINA

PALLAS

title

#blood pressure

Pressure

Systolic

/ Diastolic

#data element

Clinical trial

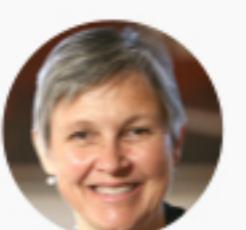
PATINA

PALLAS

title

3

COLLABORATIVE MODE TOGGLE



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Debra24 search...

Treatment

search Treatments

Overview

Medications

Home Procedures

Diet

Procedures

Send



Status & Timeline

Symptom Tracker

Imaging

Lab Results

Other Record

Treatment

Education

Schedule for Wednesday, 21 Feb 2018

Morning 6am - 12pm

Letrazole

Take 1 tablet with breakfast, daily until 12 May, 2018

Aromasin

Take 1 tablet after breakfast, daily until 28 July, 2018

Afternoon 12pm - 5pm

Aromasin

Take 1 tablet after lunch, every Wed and Thurs until 20 Jun, 2018

Night 5pm - 6am

Tamoxifen

Take 1 tablet with dinner, daily until 20 May, 2018

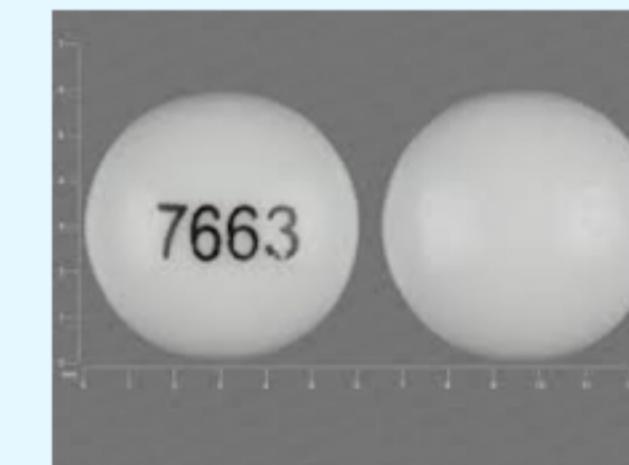
Coumadin

Take 1 tablet an hour before sleeping, daily until 25 May, 2018

Week of 19 Feb - 25 Feb, 2018

Mon	Tues	Wed	Thurs	Fri	Sat	Sun

Exemestane, sold under the brand name Aromasin among others, is a medication used to treat breast cancer. It is a member of the class of antiestrogens known as aromatase inhibitors.



Who prescribed it and when?

Dr. Chan prescribed Aromasin on 13 Jun, 2017.

How often and how many times do I need to refill it?

You will need to refill every 3 weeks until 20 Jun, 2018.

For more information see the [Medication Information](#) in [Education](#).

English

Español

Portuguese

Kreyòl Ayisyen

Tiếng Việt

Tagalog

中文

العربية

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←



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