# MITRE / FLUX NOTES SELECTED CONCEPTS vI3.7: CONTEXT/SHORTCUTS TRAY

EDWIN CHOI, DANIEL REEVES, JUHAN SONIN, 27.APR.2018



## **CONTEXT TRAY: Considerations**

## Initial considerations:

- If hierarchy of data is presented, it should be clear
- The current state (contexts) of editor should be clear to user
- The most relevant shortcuts should be easily accessible
- The user must be able to access all current contexts (patient, one condition, one medication, etc.)
- Unavailable shortcuts are hidden

## Strong reactions and new considerations:

- It's confusing that itallicized headings are not expandable. They are different from "toxicity" etc.
- Desirable for "a way to visually see" what the current state of the editor is. In primary care for example, the user may be dealing with many issues at once. This will be particularly useful for a new user or when reviewing a note.
- The strong blue box is the wrong graphic.
- The tray is currently serving three purposes, each of which is important.
  - inform the user of editor state
  - predict and present likely shortcuts
  - offers exploration of all available shortcuts across contexts (patient, or condition, or medication, or toxicity etc.)

## Challenges:

- The hierarchy of shortcuts isn't the same as the hierarchy of data. The itallicized categories are NOT contexts and do NOT require a shortcut. But they are parts of the structured data hierarchy.
- Displaying a hierarchy with contexts implies a purity and completeness. This is at odds with the goal of predictive sorting
- Serving all three purposes listed above, but not mixing them up and confusing them.

# CONTEXT TRAY: Four ideas presented Thursday, 4/27

With Subcontexts +Dropdowns No Subcontexts + Dropdowns With Subcontexts + Buttons No Subcontexts + Buttons @ := := @ @ **TEMPLATES TEMPLATES** Q Search shortcuts Q Search shortcuts **SNIPPETS SNIPPETS** Patient > TEMPLATES > TEMPLATES Patient Invasive ductal car... Invasive ductal car... > SNIPPETS > SNIPPETS Staging Taxol > PATIENT > PATIENT **Toxicity** Q Search shortcuts Taxol > Invasive ductal car... ∨ Invasive ductal car... grade grade > Staging Q Search shortcuts #Grade 1 #Grade 1 Toxicity grade #Grade 2 #Grade 2 grade #Grade 1 #Grade 3 #Grade 3 #Grade 1 #Grade 2 #Grade 4 #Grade 4 #Grade 2 #Grade 3 #Grade 5 #Grade 5 #Grade 4 #Grade 3 adverse effect adverse effect #Grade 5 #Grade 4 #Febrile neutropen... #Febrile neutropen... adverse effect adverse effect #Fatigue #Fatigue #Febrile neutropen... #Febrile neutrop... #Anemia #Anemia #Fatigue #Fatigue #Diarhea #Diarhea #Generalized musc... #Anemia attribution attribution #Anemia #Naussea #Treatment #Treatment #Naussea #Diarhea #Disease #Disease #Diarhea #Error attribution #Error see more #Unknown #Unknown #Treatment attribution #Unrelated #Unrelated #Disease #Treatment metastasis metastasis #Error #Disease #M0 #M0 #Unrelated #Error #M1 #M1 #Unkown #Unknown #disease status #disease status > Taxol #Unrelated #toxicity #toxicity #ER #ER T Remove note T Remove note T Remove note T Remove note

# Summary

Timeline

Medication

Allergies

Labs

Social

Disease

status

Dr. Jraker299 referred ms. to pain in left breast. Dr. Iraker299 is ms. Debra24 Hernandez98Aj's primary care physician for 12 years.

Debra24 Hernandez98Aj due

# 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

New Note 10 April 2018

**REASON FOR VISIT:** 

**HISTORY OF PRESENT ILLNESS:** 

Dr. Free2 Will

Dana Farber Cancer Institute

## × Close





## Q Search shortcuts

- > TEMPLATES
- > SNIPPETS
- > PATIENT

### > Invasive ductal car...

- > Staging
- Toxicity

grade

#Grade 1

#Grade 2

#Grade 3

#Grade 4

adverse effect

#Febrile neutrop...

#Fatigue

#Anemia

#Naussea

#Diarhea

attribution

#Treatment

#Disease

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> Taxol

TRemove note

unremarkable mammogram December 3, 2015. She recalls feeling a sharp pain in her right breast about 8 months later, and feeling a palpable lump two months after that. A diagnostic mammogram on August 13, 2017, revealed a 2 cm mass in the right breast at 7 o'clock and an indeterminate lymph node in the right axilla, 13 mm. She underwent neoadjuvant cyclophosphamide (ddAC) followed by Taxol (T) from October 20, 2017 to February 23, 2018. Taxol was dose reduced to 60mg/m2 for the last 2 cycles and stopped after 11 doses due to neuropathy. She received 11 of 12 planned doses.

> She underwent right lumpectomy with Dr. Ford on March 12, 2018. Pathology report on March 16, 2018 showed no residual disease, 0/2 SLNs, pathological complete response pCR.

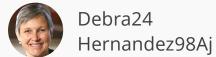
Ms. Ortiz is a 43-year-old premenopausal Hispanic woman who recalls an

## **ASSESSMENT**

I assess #staging #T0 #N0. She is experiencing #Toxicity

follow-up regarding Invasive ductal carcinoma of the breast





Date of birth 5 Apr 1966 (51) Female

Admin. sex Location Boston, MA Workflow

Pre-encounter

Condition

Ductal carcinoma of the breast

View



Q Debra24 search...

 $\Box$ 

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New Note 10 April 2018 Dr. Free2 Will

Dana Farber Cancer Institute

× Close





### **REASON FOR VISIT:**

follow-up regarding Invasive ductal carcinoma of the breast

### **HISTORY OF PRESENT ILLNESS:**

Ms. Ortiz is a 43-year-old premenopausal Hispanic woman who recalls an unremarkable mammogram December 3, 2015. She recalls feeling a sharp pain in her right breast about 8 months later, and feeling a palpable lump two months after that. A diagnostic mammogram on August 13, 2017, revealed a 2 cm mass in the right breast at 7 o'clock and an indeterminate lymph node in the right axilla, 13 mm.

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Q Search shortcuts

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- > SNIPPETS
- > PATIENT

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#Grade 1

#Grade 2

#Grade 3

#Grade 4

#Grade 5

adverse effect

#Febrile neutropen...

#Fatigue

#Anemia

#Diarhea

attribution

#Treatment

#Disease

#Error

#Unknown

**#Unrelated** 

metastasis

#M0

#M1

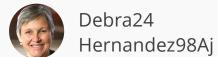
#disease status

#toxicity

#ER

TRemove note





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Admin. sex Location Female

**HISTORY OF PRESENT ILLNESS:** 

lymph node in the right axilla, 13 mm.

pathological complete response pCR.

**ASSESSMENT** 

Boston, MA

follow-up regarding Invasive ductal carcinoma of the breast

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60mg/m2 for the last 2 cycles and stopped after 11 doses due to

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Workflow

Pre-encounter

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Ductal carcinoma of the breast

View



Q Debra24 search...

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New Note

**REASON FOR VISIT:** 

10 April 2018

Dr. Free2 Will

Dana Farber Cancer Institute

× Close





**TEMPLATES SNIPPETS** 

Patient

Invasive ductal car...

Staging

## Toxicity

Taxol

### Q Search shortcuts

grade

#Grade 1

#Grade 2

#Grade 3

#Grade 4

#Grade 5

adverse effect

#Febrile neutropen...

#Fatigue

#Generalized musc...

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#Naussea

#Diarhea

see more

attribution

#Treatment

#Disease

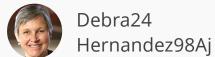
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#Unknown

**#Unrelated** 

T Remove note





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View



Q Debra24 search...

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New Note

10 April 2018

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× Close





**TEMPLATES SNIPPETS** 

Patient

## **Invasive ductal car...**

Taxol

## Q Search shortcuts

grade

#Grade 1

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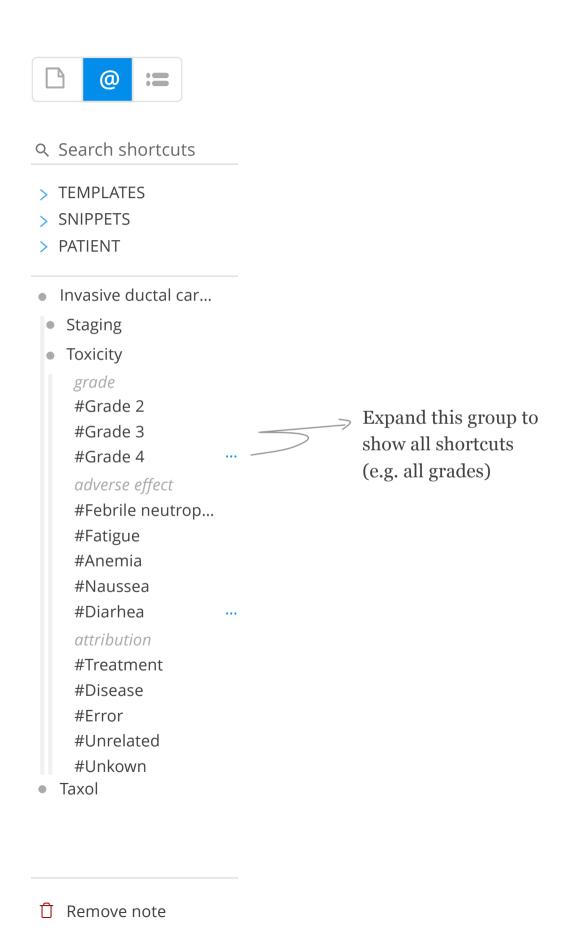
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# CONTEXT TRAY: Improvements on previous ideas



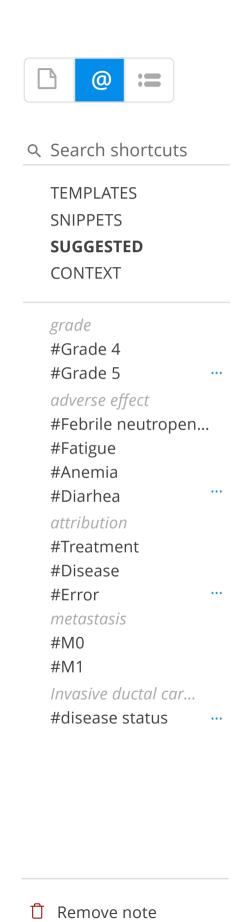


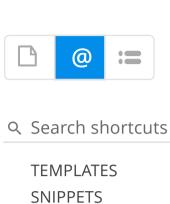
Q Search shortcuts

```
TEMPLATES
SNIPPETS
SHORTCUTS
grade
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metastasis
#M0
#M1
Invasive ductal car...
#disease status
#toxicity
#ER
#PR
#HER2
```



# CONTEXT TRAY: Giving user a choice





> Taxol

Invasive ductal car...

> Staging

SUGGESTED

**CONTEXT** 

Toxicity

grade

#Grade 2

#Grade 3

#Grade 4

adverse effect

#Febrile neutrop...

#Fatigue

#Anemia

#Naussea

attribution

#Treatment

#Disease

#Error

#Unrelated

#Unkown

#disease status

#toxicity

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T Remove note

All menus are expandable and collapsable. By default, only the newest, most recent contexts are open all the way down.

Note that all Invasive ductal carcinoma shortcuts are available here. This is a fully expandable, traditional, tree.

# CONTEXT TRAY: Separating out the context state information

