



# Using VisualDx in the SMART on FHIR Environment

## Features Overview

### BUILD A DIFFERENTIAL

If the patient record contains conditions recognized by VisualDx, they will appear as possible chief complaints at the top of the screen. Clinicians can select a chief complaint to quickly start building a custom differential.

### SMART SEARCH

Search by chief complaint, medication, or travel location to start building a custom differential. Or simply search a specific diagnosis to go straight to clinical information, images, and Sympticons™.

### TIME LINE

View the patient record from the last 3 months, 6 months, 1 year, 5 years, or all time. The most recent time period with available data will be the default view for each patient. If no data is available for a time period (i.e. the patient has not been seen in the last 3 months), that time period will not be shown. If no medications were prescribed during a time period, no data will be shown.

### CHECK MEDICATIONS

If any medications appear in the patient record, VisualDx will display them here. To check adverse medication reactions, click on the medication to begin a differential.

### WHY IS THIS ITEM GRAY?

Medications or diagnoses are pulled from the patient chart and recognized by VisualDx using medical coding. If a listed item appears grayed out, VisualDx may not yet have content for the item, the coding may have been input incorrectly, or the code map may be incomplete.

The screenshot shows the VisualDx interface with the following sections:

- Search:** A search bar with the placeholder text "Enter a symptom, medication, or diagnosis" and a "Search VisualDx" button.
- Build a Differential in VisualDx:** A section with the instruction "Select chief complaint to start a workout in VisualDx" and a row of buttons for "Foot pain", "Bradycardia", "Fever", "Rash", "Tremor", "Low back pain", "Hypertension", "Cough", "Cold", and "Headache".
- Check adverse medication reactions in VisualDx:** A section with a time filter (currently set to "Last 3 months") and a table of "Prescribed Medications". The table has columns for years 2013, 2014, 2015, 2016, and 2017. Medications listed include methotrexate, ibuprofen-pseudoephedrine, acetaminophen-oxycodone, amoxicillin, buPROPION, and metformin. Some entries have PRN icons.
- Research diagnoses in VisualDx:** A section with a time filter (currently set to "Last 3 months") and a "Problem List" table. The table has columns for years 2013, 2014, 2015, 2016, and 2017. Diagnoses listed include GERD - Gastro-esophageal reflux disease, Hypothyroidism, Acute rheumatoid arthritis, Measles without complication, Asthma, and Farmer's lung. Some entries have dates and status like "[2012/08/17 - Unresolved]".

For medications, the dark bar indicates when a medication was prescribed and the length of the prescription. The light gray bar indicates that the prescription is still active in the chart.

For diagnoses, the dark bar indicates each date the complaint was noted in the record. The light gray bar indicates that the diagnosis has no abatement date. Hover over the dark or light bars to see dates and status of the diagnosis.

### RESEARCH DIAGNOSES

Current and past diagnoses are pulled from the patient record and appear on the problem list. Click on any diagnosis to see clinical information and images in VisualDx.

### WHAT DETERMINES THE DISPLAY ORDER OF DIAGNOSES?

The problem list begins with the oldest diagnoses without abatement dates, then continues with diagnoses with abatement dates. Last, gray items with no links in VisualDx are displayed in the same order - oldest unabated to abated.

### PRESCRIPTION INFORMATION

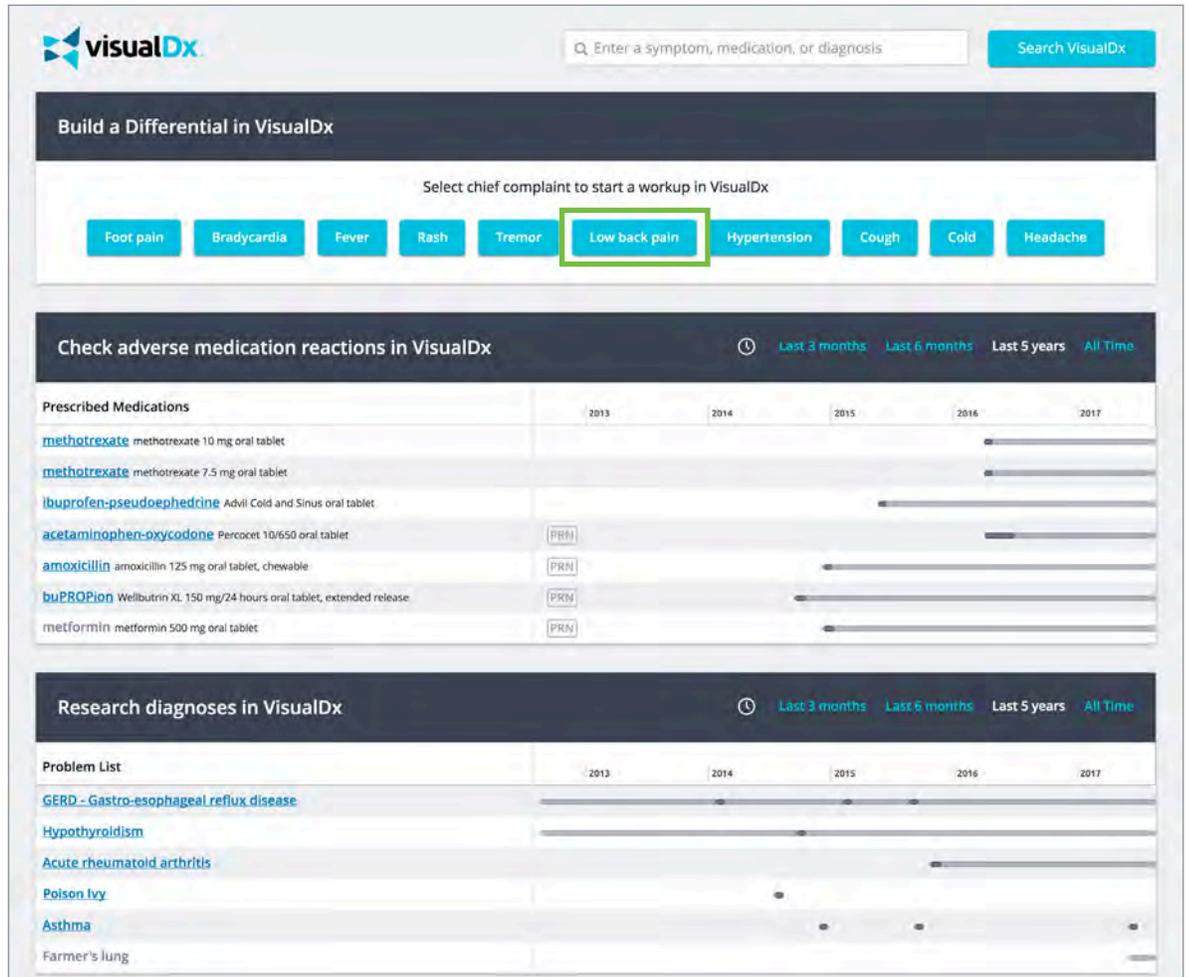
Hover over the dark gray area of the time line to see prescription information for each medication. Medications to be taken as-needed are noted as **PRN**.

## Build a Differential

### STEP 1

If the patient record contains conditions recognized by VisualDx, they will appear as possible chief complaints at the top of the screen.

Select the patient's chief complaint to begin the workup.



**Build a Differential in VisualDx**

Select chief complaint to start a workup in VisualDx

Foot pain Bradycardia Fever Rash Tremor **Low back pain** Hypertension Cough Cold Headache

**Check adverse medication reactions in VisualDx** Last 3 months Last 6 months Last 5 years All Time

Prescribed Medications	2013	2014	2015	2016	2017
<a href="#">methotrexate</a> methotrexate 10 mg oral tablet					
<a href="#">methotrexate</a> methotrexate 7.5 mg oral tablet					
<a href="#">ibuprofen-pseudoephedrine</a> Advil Cold and Sinus oral tablet					
<a href="#">acetaminophen-oxycodone</a> Percocet 10/650 oral tablet					
<a href="#">amoxicillin</a> amoxicillin 125 mg oral tablet, chewable					
<a href="#">buPROPion</a> Wellbutrin XL 150 mg/24 hours oral tablet, extended release					
<a href="#">metformin</a> metformin 500 mg oral tablet					

**Research diagnoses in VisualDx** Last 3 months Last 6 months Last 5 years All Time

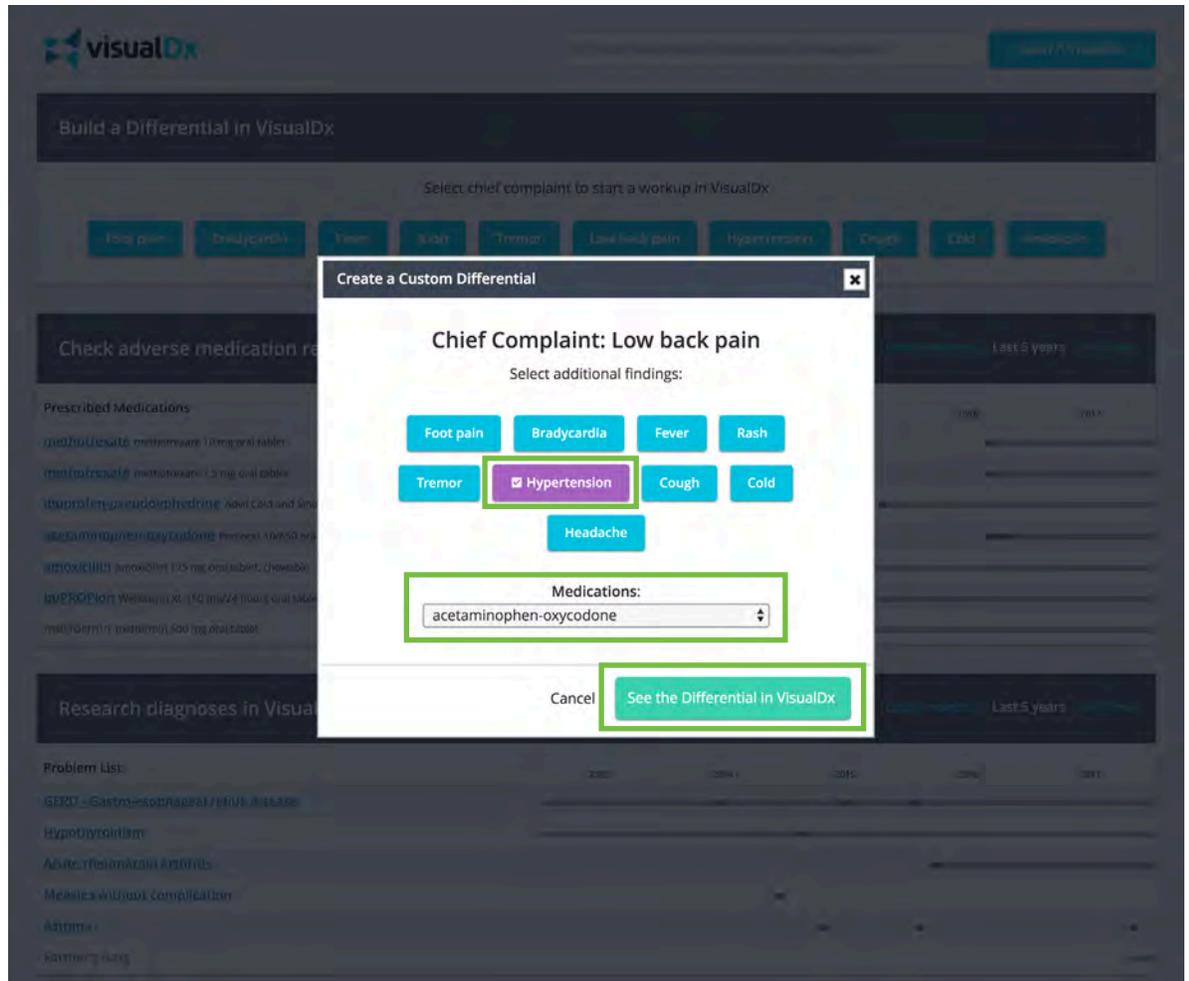
Problem List	2013	2014	2015	2016	2017
<a href="#">GERD - Gastro-esophageal reflux disease</a>					
<a href="#">Hypothyroidism</a>					
<a href="#">Acute rheumatoid arthritis</a>					
<a href="#">Poison Ivy</a>					
<a href="#">Asthma</a>					
<a href="#">Farmer's lung</a>					

## Build a Differential

### STEP 2

In the pop-up window, **select any additional findings and a medication**, if applicable, to include in the workup.

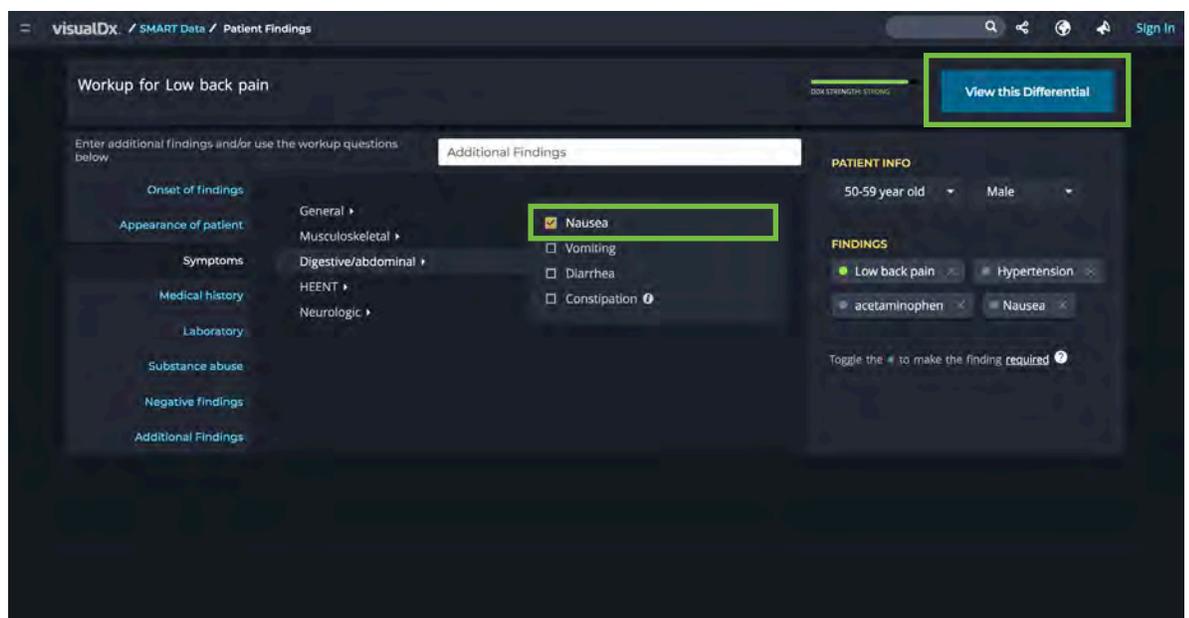
Click **See the Differential in VisualDx**.



### STEP 3

In the VisualDx workup, **add more additional findings**, if desired, to include in the workup.

Click **View this Differential**.



# Build a Differential

## STEP 4

View the differential results. Change the view from photo to Sympticon to list as desired.

Click on any diagnosis to see clinical information and images.

## EDIT YOUR WORKUP

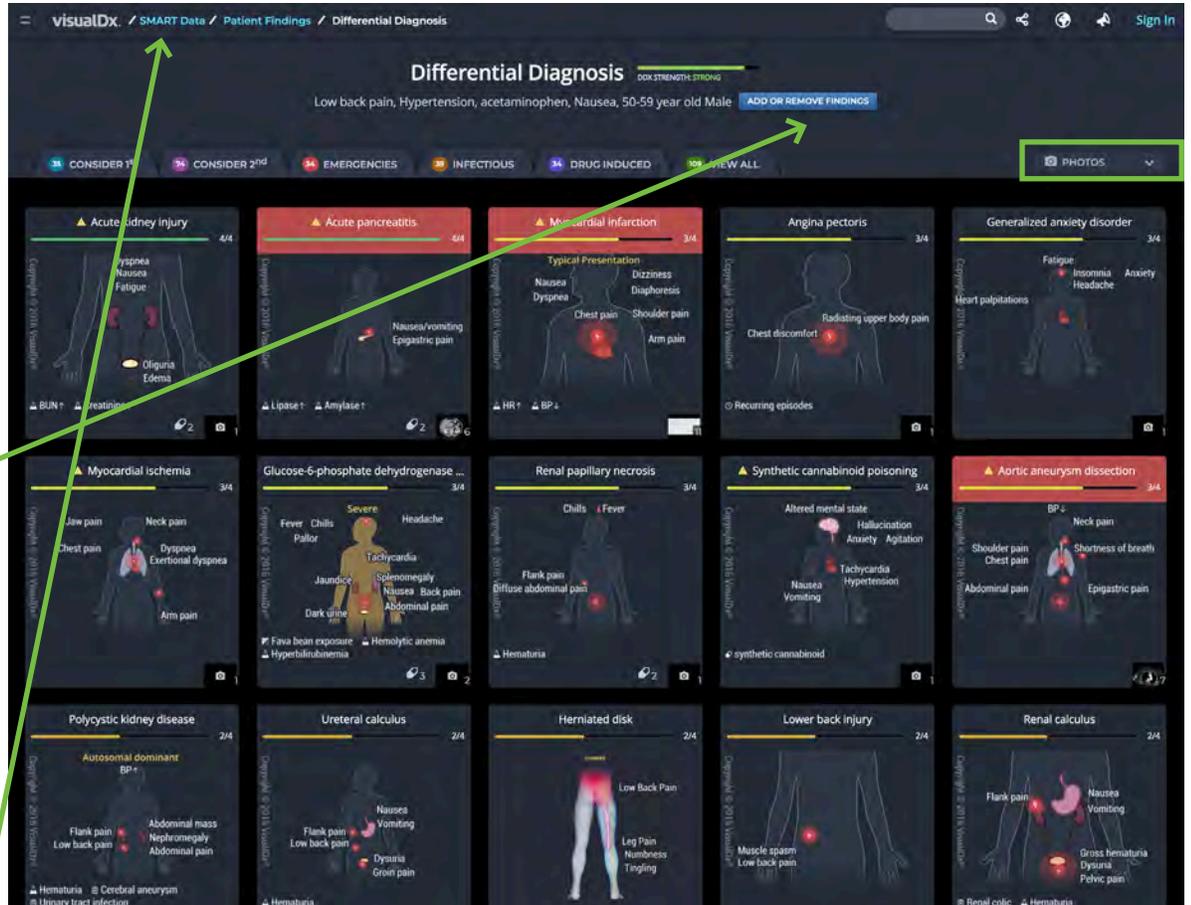
Need to make changes to the findings you entered?

Click on **Add or Remove Findings** to make changes and view your differential results again.

## GO BACK AND START AGAIN...

Want to go back to the beginning and look up a medication or click directly on a diagnosis?

Click on **SMART Data** to return to the start screen. Do this at anytime during the workup to start over.

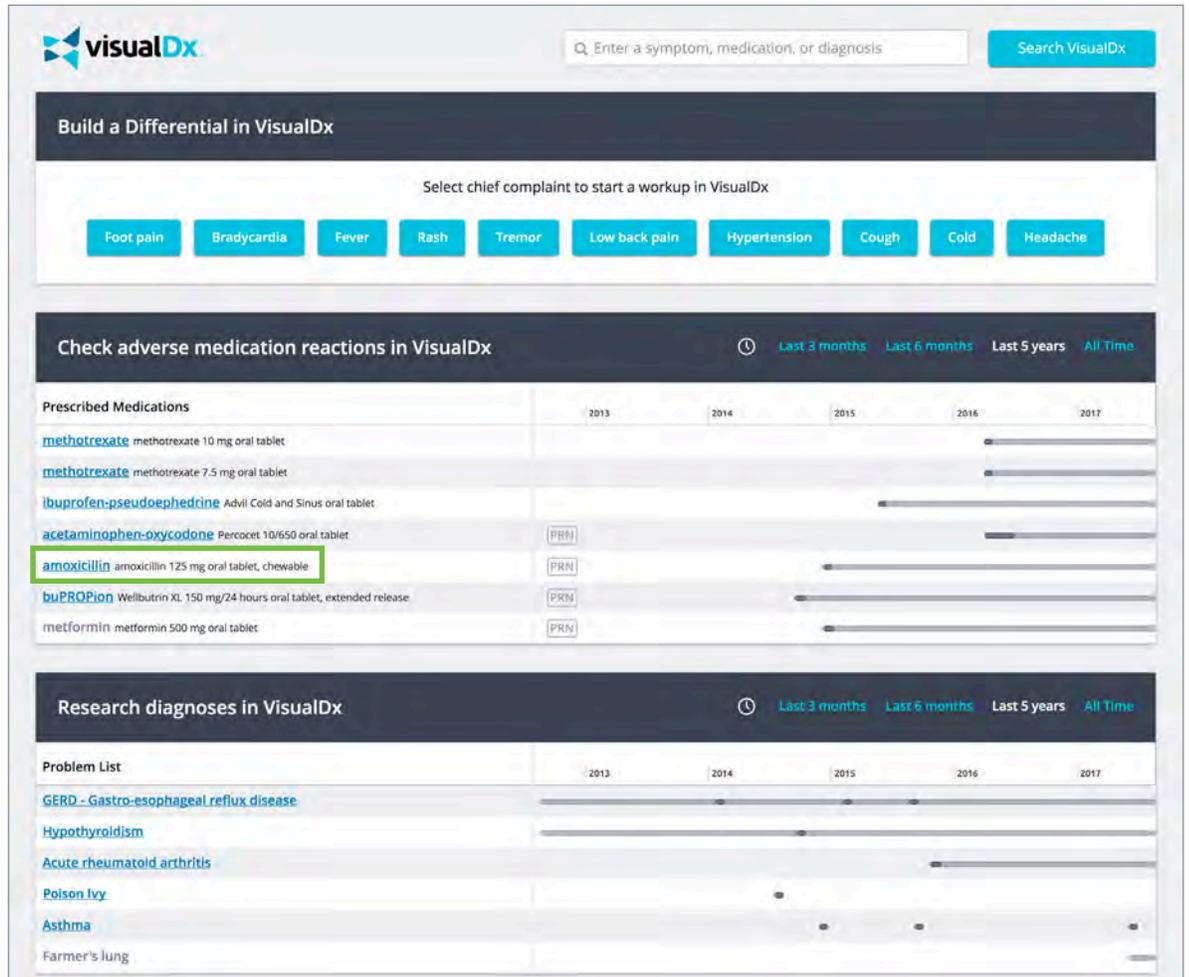


# Check for Adverse Medication Reactions

## STEP 1

Prescribed medications from the patient record will be shown, even if VisualDx does not have related content.

Select a medication link to begin the workup.



The screenshot displays the VisualDx interface with the following sections:

- Build a Differential in VisualDx:** A search bar at the top with the text "Enter a symptom, medication, or diagnosis" and a "Search VisualDx" button. Below it, a section titled "Select chief complaint to start a workup in VisualDx" contains buttons for: Foot pain, Bradycardia, Fever, Rash, Tremor, Low back pain, Hypertension, Cough, Cold, and Headache.
- Check adverse medication reactions in VisualDx:** A section with a clock icon and filters for "Last 3 months", "Last 6 months", "Last 5 years", and "All Time". It features a "Prescribed Medications" table with columns for years 2013 through 2017. The table lists:
 

Medication	2013	2014	2015	2016	2017
<a href="#">methotrexate</a> methotrexate 10 mg oral tablet					
<a href="#">methotrexate</a> methotrexate 7.5 mg oral tablet					
<a href="#">ibuprofen-pseudoephedrine</a> Advil Cold and Sinus oral tablet					
<a href="#">acetaminophen-oxycodone</a> Percocet 10/650 oral tablet					
<a href="#">amoxicillin</a> amoxicillin 125 mg oral tablet, chewable					
<a href="#">buPROPion</a> Wellbutrin XL 150 mg/24 hours oral tablet, extended release					
<a href="#">metformin</a> metformin 500 mg oral tablet					
- Research diagnoses in VisualDx:** A section with a clock icon and filters for "Last 3 months", "Last 6 months", "Last 5 years", and "All Time". It features a "Problem List" table with columns for years 2013 through 2017. The table lists:
 

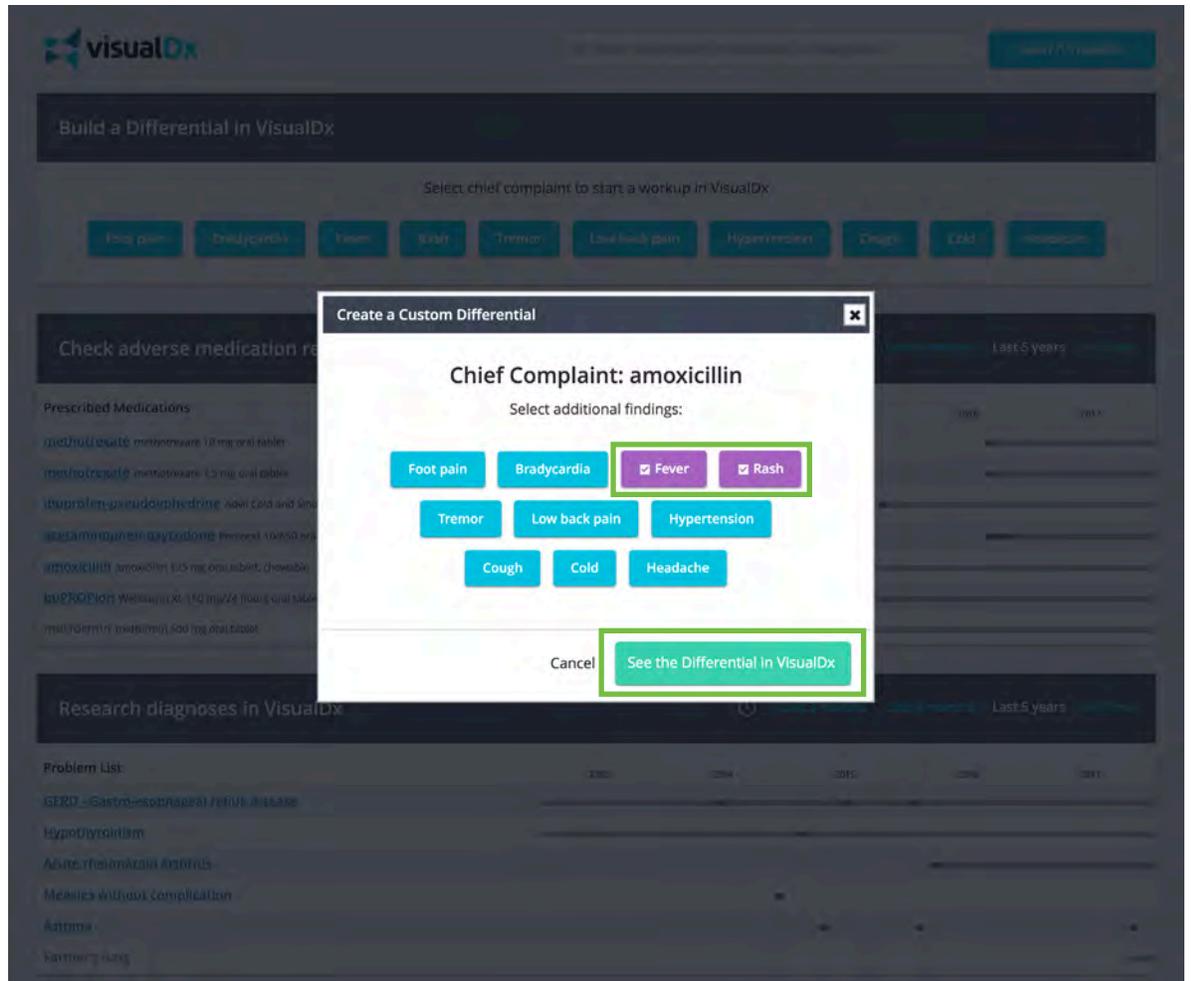
Problem	2013	2014	2015	2016	2017
<a href="#">GERD - Gastro-esophageal reflux disease</a>					
<a href="#">Hypothyroidism</a>					
<a href="#">Acute rheumatoid arthritis</a>					
<a href="#">Poison Ivy</a>					
<a href="#">Asthma</a>					
<a href="#">Farmer's lung</a>					

## Check for Adverse Medication Reactions

### STEP 2

In the pop-up window, **select any additional findings**, if applicable, to include in the workup. (If no findings are available in the patient record, you will skip right to Step 4.)

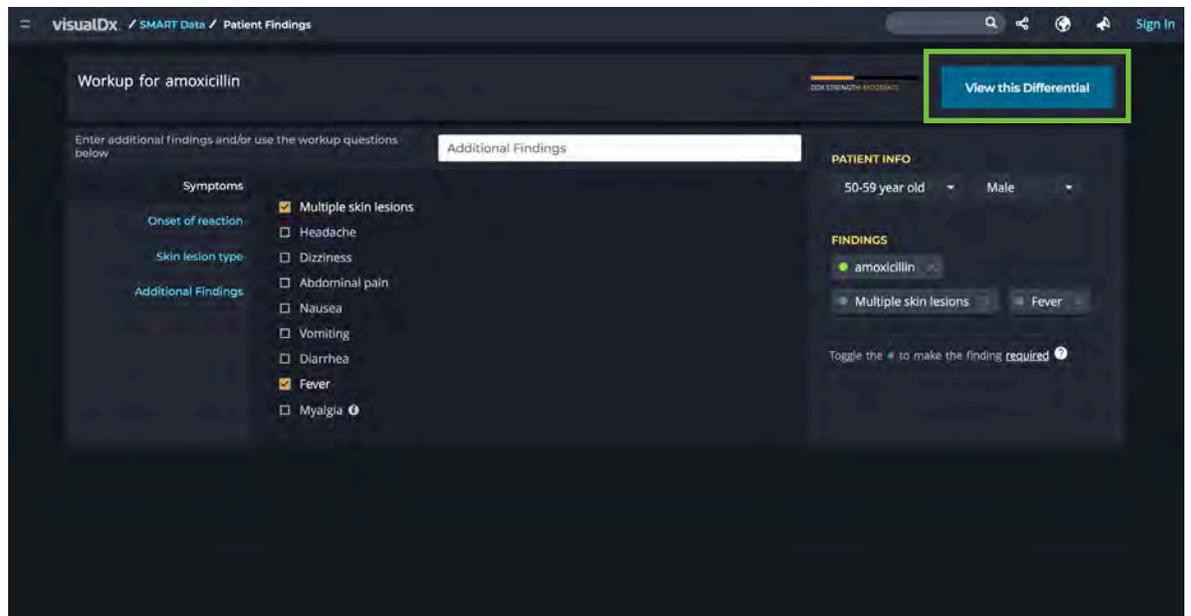
Click **See the Differential in VisualDx**.



### STEP 3

In the VisualDx workup, **add more additional findings**, if desired, to include in the workup.

Click **View this Differential**.



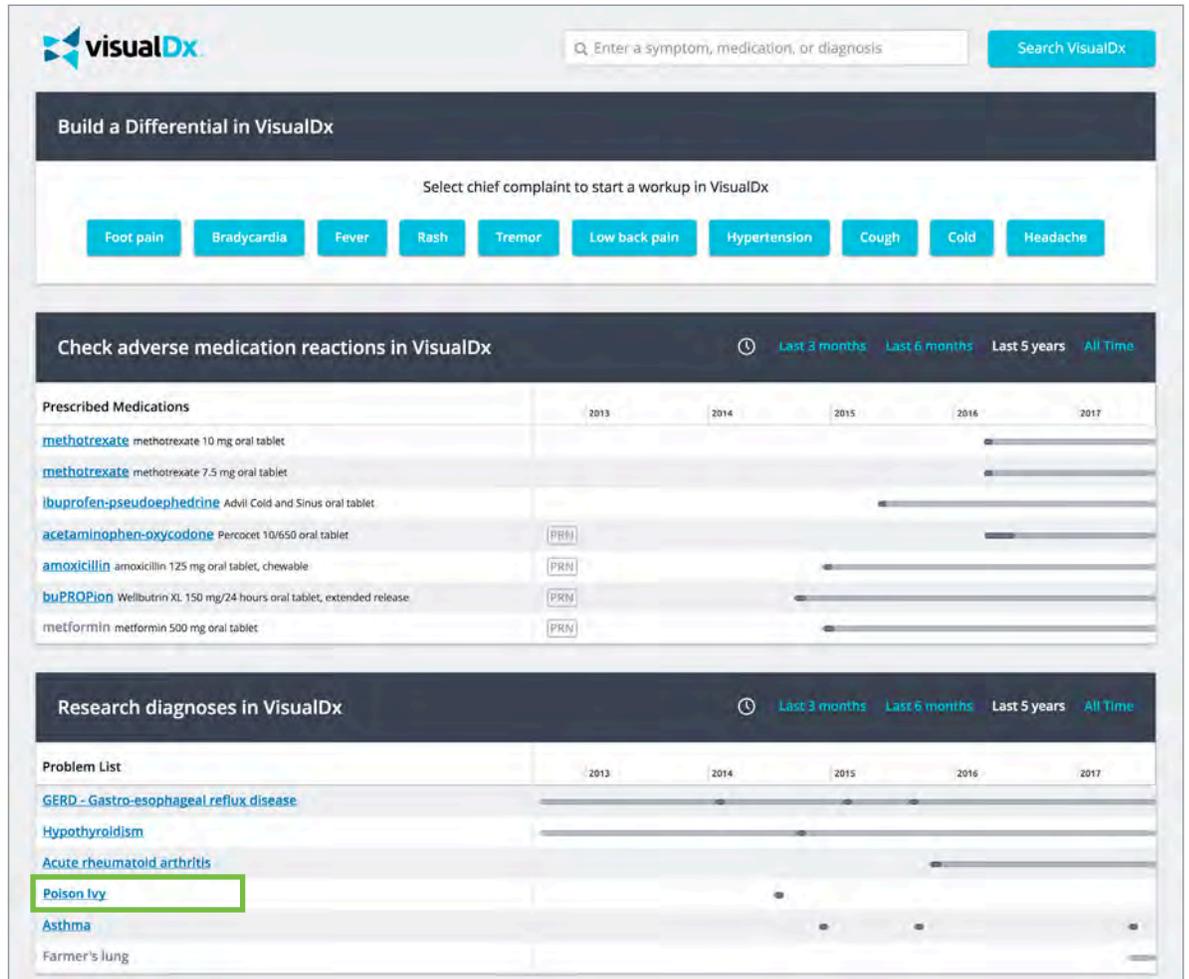


## Research Diagnoses

### STEP 1

Diagnoses from the patient record will be shown, even if VisualDx does not have related content.

Select a diagnosis link to begin the workup.



The screenshot shows the VisualDx interface. At the top, there is a search bar with the text "Enter a symptom, medication, or diagnosis" and a "Search VisualDx" button. Below this is a section titled "Build a Differential in VisualDx" with a sub-header "Select chief complaint to start a workup in VisualDx". This section contains several buttons for symptoms: Foot pain, Bradycardia, Fever, Rash, Tremor, Low back pain, Hypertension, Cough, Cold, and Headache.

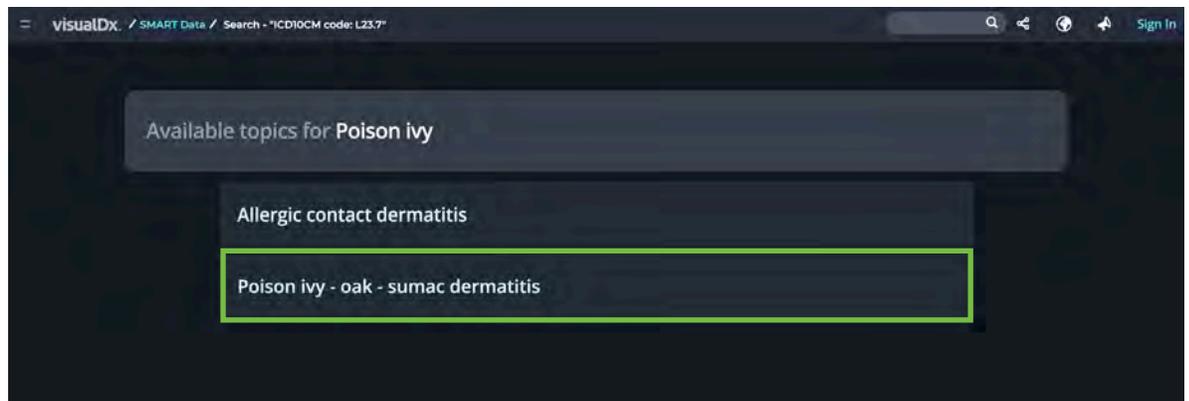
Below the symptom buttons is a section titled "Check adverse medication reactions in VisualDx" with a sub-header "Prescribed Medications". This section has a table with columns for years 2013, 2014, 2015, 2016, and 2017. The table lists several medications: methotrexate 10 mg oral tablet, methotrexate 7.5 mg oral tablet, ibuprofen-pseudoephedrine Advil Cold and Sinus oral tablet, acetaminophen-oxycodone Percocet 10/650 oral tablet, amoxicillin amoxicillin 125 mg oral tablet, chewable, buPROPION Wellbutrin XL 150 mg/24 hours oral tablet, extended release, and metformin metformin 500 mg oral tablet. Each medication has a "PRN" button next to it.

Below the medication table is a section titled "Research diagnoses in VisualDx" with a sub-header "Problem List". This section also has a table with columns for years 2013, 2014, 2015, 2016, and 2017. The table lists several diagnoses: GERD - Gastro-esophageal reflux disease, Hypothyroidism, Acute rheumatoid arthritis, Poison Ivy, Asthma, and Farmer's lung. The "Poison Ivy" diagnosis is highlighted with a green box.

### STEP 2

If there is more than one possible match for the diagnosis in VisualDx, clinicians will be shown all possible matches. (If only one topic is available you will skip right to Step 4.)

In this case, **click Rubeola in VisualDx.**



The screenshot shows the VisualDx interface with the search bar containing "SMART Data / Search - 'ICD10CM code: L23.7'". Below the search bar is a section titled "Available topics for Poison ivy". This section contains two topics: "Allergic contact dermatitis" and "Poison ivy - oak - sumac dermatitis". The "Poison ivy - oak - sumac dermatitis" topic is highlighted with a green box.

## Research Diagnoses

### STEP 3

View clinical information, including a synopsis, what to look for, best tests, therapy, and more.

To see images for the diagnosis, **click View all Images**.

### STEP 4

View the images. Filter the images by skin type, body location, and image type.

Click on any image to see a larger version.

### GO BACK AND START AGAIN...

Want to go back to the beginning and look up a medication or click directly on a diagnosis?

Click on **SMART Data** to return to the start screen. Do this at anytime during the workup to start over.