

Release Date: 8/3/2020

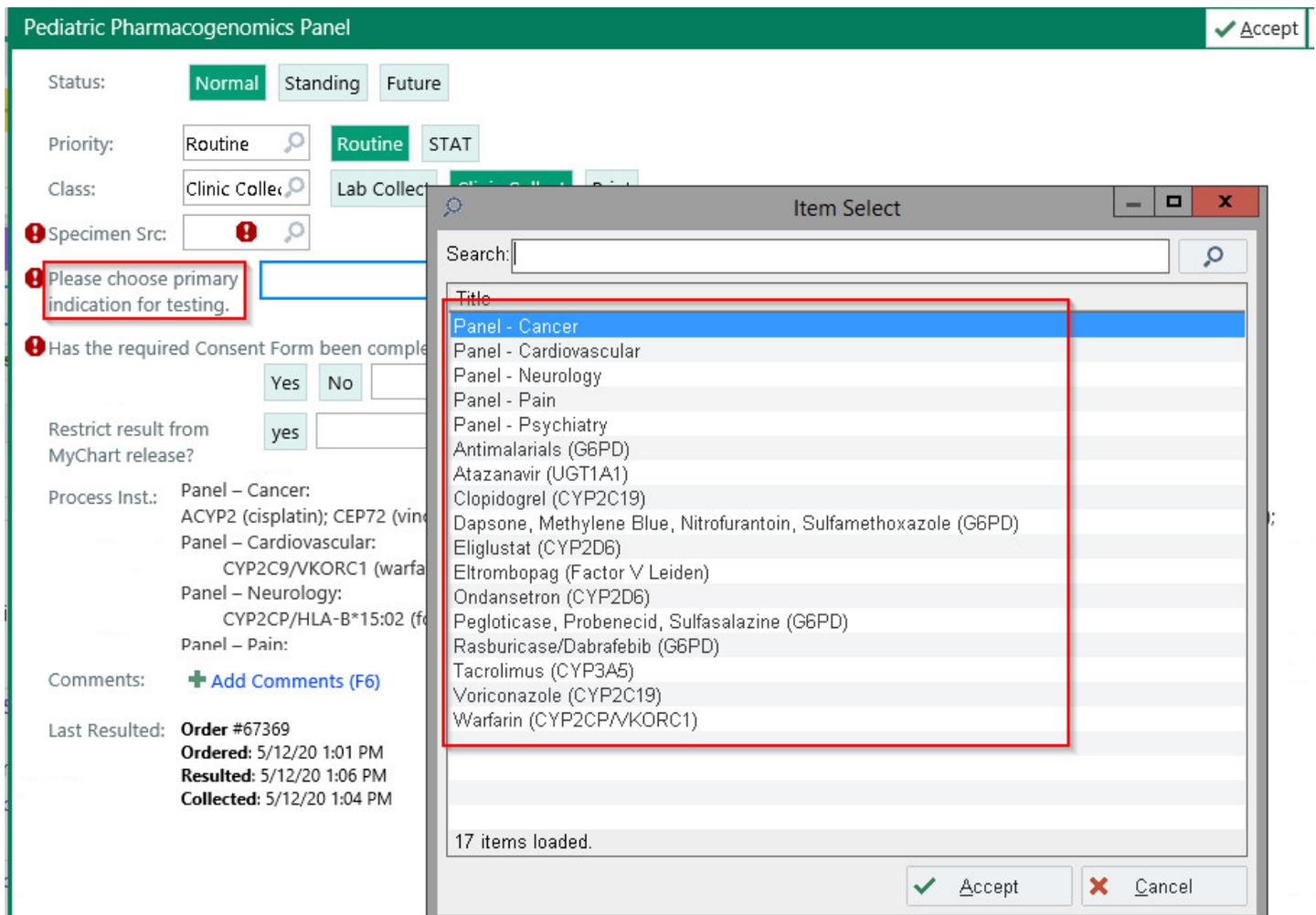
Audience: Providers

Genomic Indicators

Patients who have genetic testing results from the **Pediatric Pharmacogenomics Panel** will have **Genomic Indicators** applied to their chart that can then be used for decision support. This Tip Sheet will walk you through this process and what it looks like in *Epic*.

Workflow

1. The Provider consents the patient for genetic testing and places the **Pediatric Pharmacogenomics Panel Order**.
2. The Provider will address all hardstops and choose a primary indication for testing:



The screenshot shows the 'Pediatric Pharmacogenomics Panel' interface. The status is 'Normal', priority is 'Routine', and class is 'Clinic Collection'. A red box highlights a message: 'Please choose primary indication for testing.' An 'Item Select' dialog box is open, displaying a list of 17 items. The first item, 'Panel - Cancer', is selected and highlighted in blue. The list includes various panels and drug-gene interactions. At the bottom of the dialog box, there are 'Accept' and 'Cancel' buttons.

Pediatric Pharmacogenomics Panel ✓ Accept

Status: **Normal** Standing Future

Priority: Routine **Routine** STAT

Class: Clinic Collec Lab Collec

❗ Specimen Src: ❗

❗ Please choose primary indication for testing.

❗ Has the required Consent Form been complete? Yes No

Restrict result from MyChart release? yes

Process Inst.: Panel – Cancer: ACYP2 (cisplatin); CEP72 (vinorelbine)
Panel – Cardiovascular: CYP2C9/VKORC1 (warfarin)
Panel – Neurology: CYP2CP/HLA-B*15:02 (gabapentin)
Panel – Pain:

Comments: [+ Add Comments \(F6\)](#)

Last Resulted: **Order #67369**
Ordered: 5/12/20 1:01 PM
Resulted: 5/12/20 1:06 PM
Collected: 5/12/20 1:04 PM

Item Select - □ ×

Search:

Title

- Panel - Cancer**
- Panel - Cardiovascular
- Panel - Neurology
- Panel - Pain
- Panel - Psychiatry
- Antimalarials (G6PD)
- Atazanavir (UGT1A1)
- Clopidogrel (CYP2C19)
- Dapsone, Methylene Blue, Nitrofurantoin, Sulfamethoxazole (G6PD)
- Eliglustat (CYP2D6)
- Eltrombopag (Factor V Leiden)
- Ondansetron (CYP2D6)
- Pegloticase, Probenecid, Sulfasalazine (G6PD)
- Rasburicase/Dabrafenib (G6PD)
- Tacrolimus (CYP3A5)
- Voriconazole (CYP2C19)
- Warfarin (CYP2CP/VKORC1)

17 items loaded.

✓ Accept ✗ Cancel

3. Once the specimen has been collected and results have filed to the patients chart, the ordering physician will receive the results in their Results folder of InBasket.

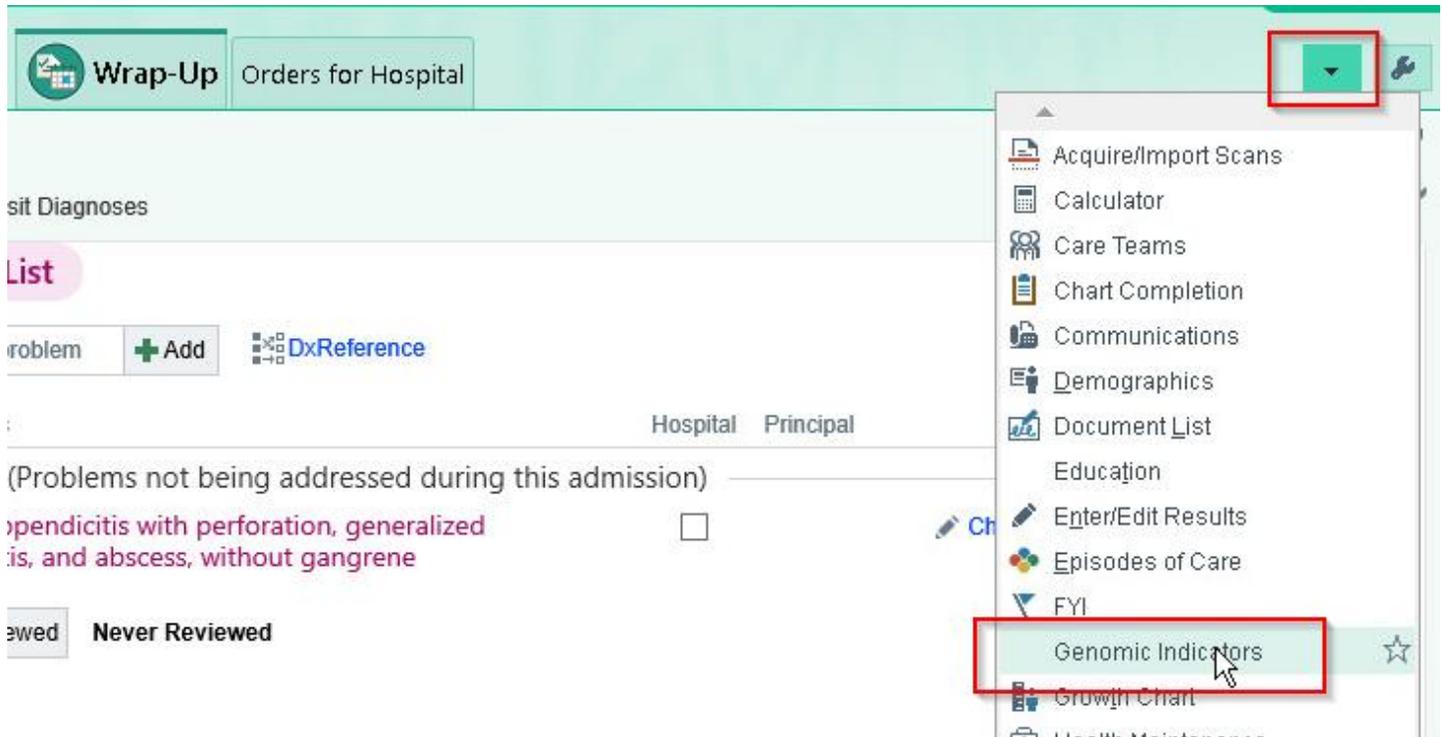
The screenshot shows a patient's InBasket interface. On the left is the patient's profile for Llama T. Wisdom, a 9-year-old female. The main area displays a message titled "Pediatric Pharmacogenomics Panel: 20P-197DL002" with a status of "Final result" and a diagnosis of "Acute appendicitis with perforation, ...". Below the message is a table of genomic components and their phenotypes.

Component	Result
ACYP2 Genotype	rs1872328 G/A
ACYP2 Phenotype	Heterozygous for rs1872328 A allele
CACNA1S Genotype	No Pathogenic Variant Detected
CACNA1S Phenotype	Uncertain Susceptibility to Malignant Hyperthermia
CEP72 Genotype	rs924607 C/C
CEP72 Phenotype	Normal CEP72 expression
CYP2C Genotype	g.96405502G>A G/G
CYP2C Phenotype	Low Sensitivity
CYP2C19 Genotype	*1/*1
CYP2C19 Phenotype	Normal Metabolizer
CYP2C9 Genotype	*1/*3

4. The Provider can jump to the **Genmomic Indicators** activity from the More button on the InBasket message toolbar.

The screenshot shows the InBasket message toolbar. A red box highlights the "More" button, which has opened a dropdown menu. The menu items include: Encounter, Telephone Call, Comment, Edit Rslt, Route, Result Release, HM Mod, Prep for Case, Prevent Auto-Release, Share Indicators, Unshare Indicators, and Genomic Indicators. The "Genomic Indicators" option is highlighted with a red box and a mouse cursor.

5. The **Genomic Indicators Activity** can also be reached from the **More** activity within a patient visit:



6. Once in the **Genomic Indicators Activity**, you will see indicators that have been applied to the patient’s chart based on the patient’s genetic lab results.



- Checking the “Share with patient?” box will allow the patient to see the shared indicator via MyChart.
- **IMPORTANT:** Only users with the appropriate security will have editing access to the Genomic Indicators Activity. Without the appropriate security the activity is **Read Only**.

7. Based on certain **Genomic Indicators**, a **Best Practice Advisory (BPA)** could fire when a provider places a medication order that alerts them to a pharmacogenomic interaction so they have the opportunity to remove the medication order and consider something that may be more effective for the patient.

For Example: If a patient has the CYP2C19 Poor Metabolizer Genomic Indicator, and a provider tries to order Clopidogrel, a BPA will fire alerting the provider to a pharmacogenomic interaction.

Important (1)

⚠ Pharmacogenomic Interaction - CYP2C19 / Clopidogrel

Consider alternative therapy. Examples of alternative drugs: prasugrel (contraindicated in TIA/Stroke patients), ticagrelor, aspirin, aspirin plus dipyridamole.

Remove the following orders? _____

Remove

Keep

 **clopidogrel (PLAVIX) 5 mg/mL suspension**
oral, Daily, First Dose today at 0915 WASTE: Blue

[Review this patient's genomic indicators](#)

Acknowledge Reason _____

Benefit outweighs risk

✓ Accept

Dismiss