7/29 Follow-Up

Updates

☑ Addressed `hrs/min` bug with `PostLevels` Vd calculation.

☑ Added Patient-Specific AUC to progress note in `PostLevels`.

☑ Tried to incorporate "Monitoring Form" digitally into calculator.

Next Steps

☐ `PostLevels`: Levels/Labs helper after inputting levels

☐ `PatientList`: Day of therapy / Timeout to Patient List - Need to add logic for Timeout (48-72 hrs?)

☐ `User Guide`: Edit guide to update information

☐ `NewConsult`:Add "Transfer to DMC Calculator" for `New Consult` userform

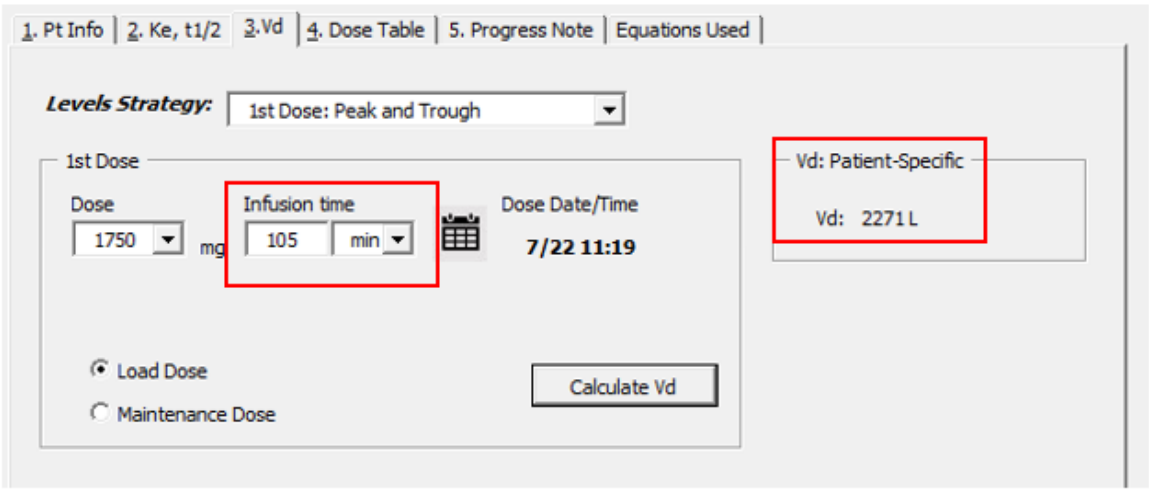
Details and Screenshots of updates

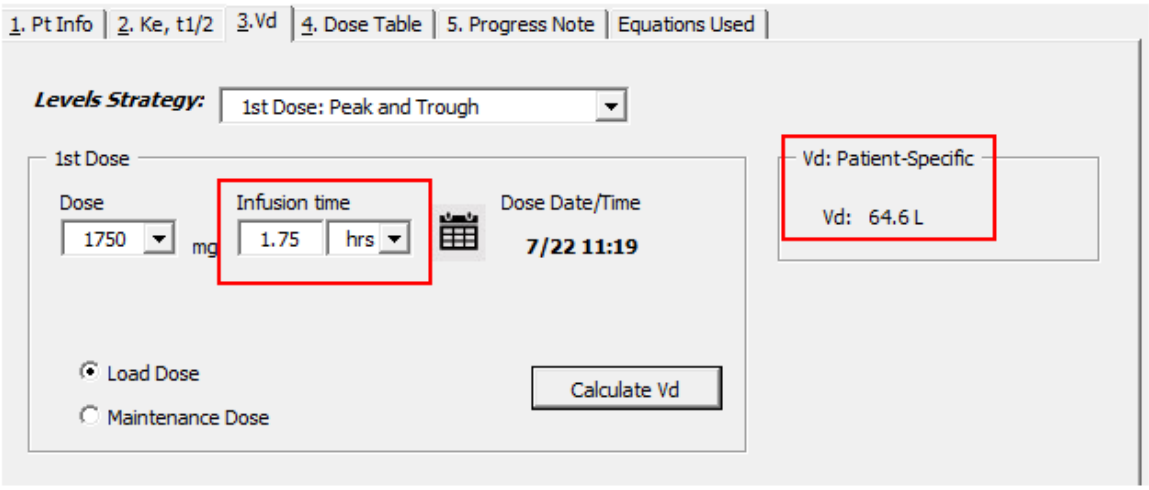
1.) Bug Fix with Vd calculation when *minutes* are selected

> 1. Calculator does not calculate accurate **Vd** if infusion time changed to ***minutes***.
>
>   If unable to convert minutes to hours in the equation, maybe we should remove minutes as an options?
>
>   Especially since Cerner default vancomycin infusion times (at least at Henderson) is minutes for 1.25gm and 1.75gm doses.
>
>   Having the options may cause confusion and lead to inappropriate dose adjustments.

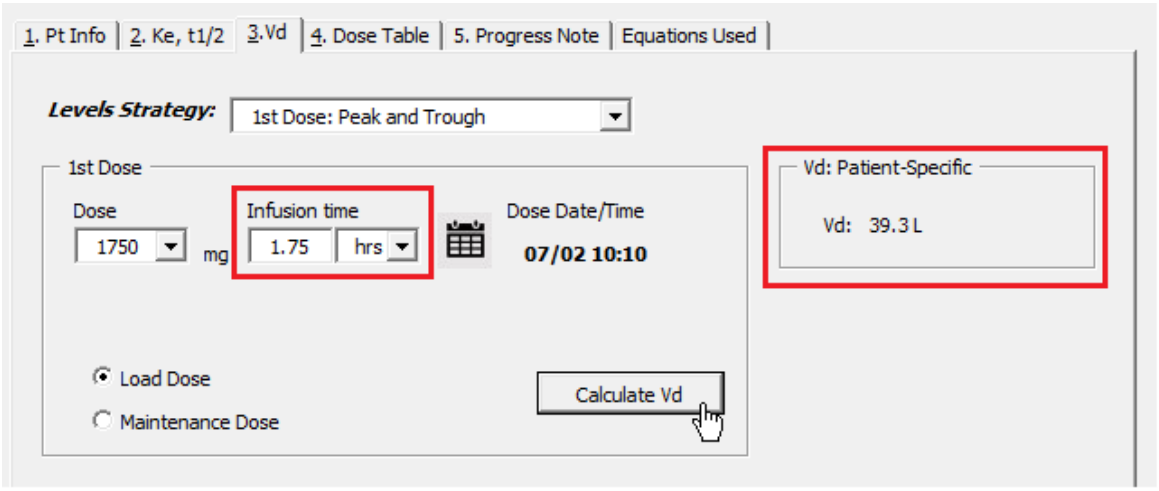
☑ Addressed `hrs/min` bug with `PostLevels` Vd calculation.

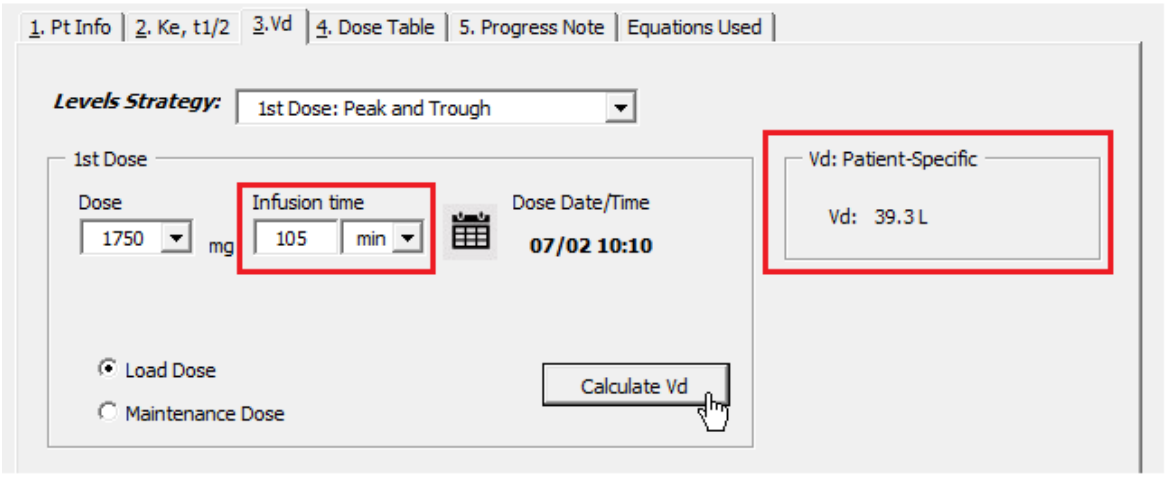
Before: was treating minutes like hours for Vd calculation.


1. Pt Info
2. Ke, t1/2
3.Vd
4. Dose Table
5. Progress Note
Equations Used
Levels Strategy:
1st Dose: Peak and Trough
1st Dose
Dose
1750
mg
Infusion time
105
min
Dose Date/Time
7/22 11:19
Vd: Patient-Specific
Vd: 2271 L
Load Dose
Maintenance Dose
Calculate Vd


1. Pt Info
2. Ke, t1/2
3.Vd
4. Dose Table
5. Progress Note
Equations Used
Levels Strategy:
1st Dose: Peak and Trough
1st Dose
Dose
1750
mg
Infusion time
1.75
hrs
Dose Date/Time
7/22 11:19
Vd: Patient-Specific
Vd: 64.6 L
Load Dose
Maintenance Dose
Calculate Vd

After:





VBA Code:

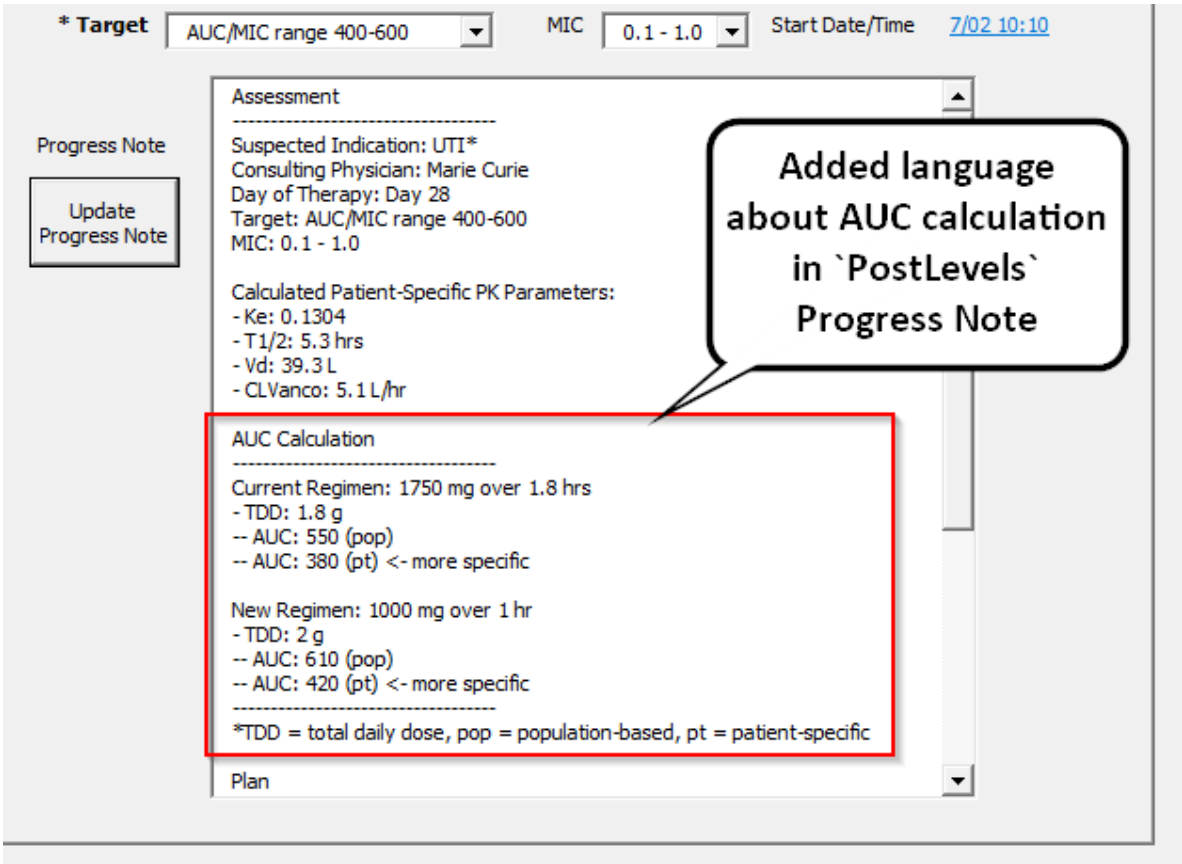
```
'Declare Tinf (or infusion time) into memory'
Dim Tinf As Double:

If PostLevels.cmbInfusionTimeUnits = "hrs" Then
    Tinf = CDbl(PostLevels.tbTinf)
'Convert infusion time to hours if dropdown is in "min"
ElseIf PostLevels.cmbInfusionTimeUnits = "min" Then
    Tinf = CDbl(PostLevels.tbTinf) / 60
End If
```

2.) Added Patient-Specific AUC to progress note in `PostLevels`

☑ Added Patient-Specific AUC to progress note in `PostLevels`.

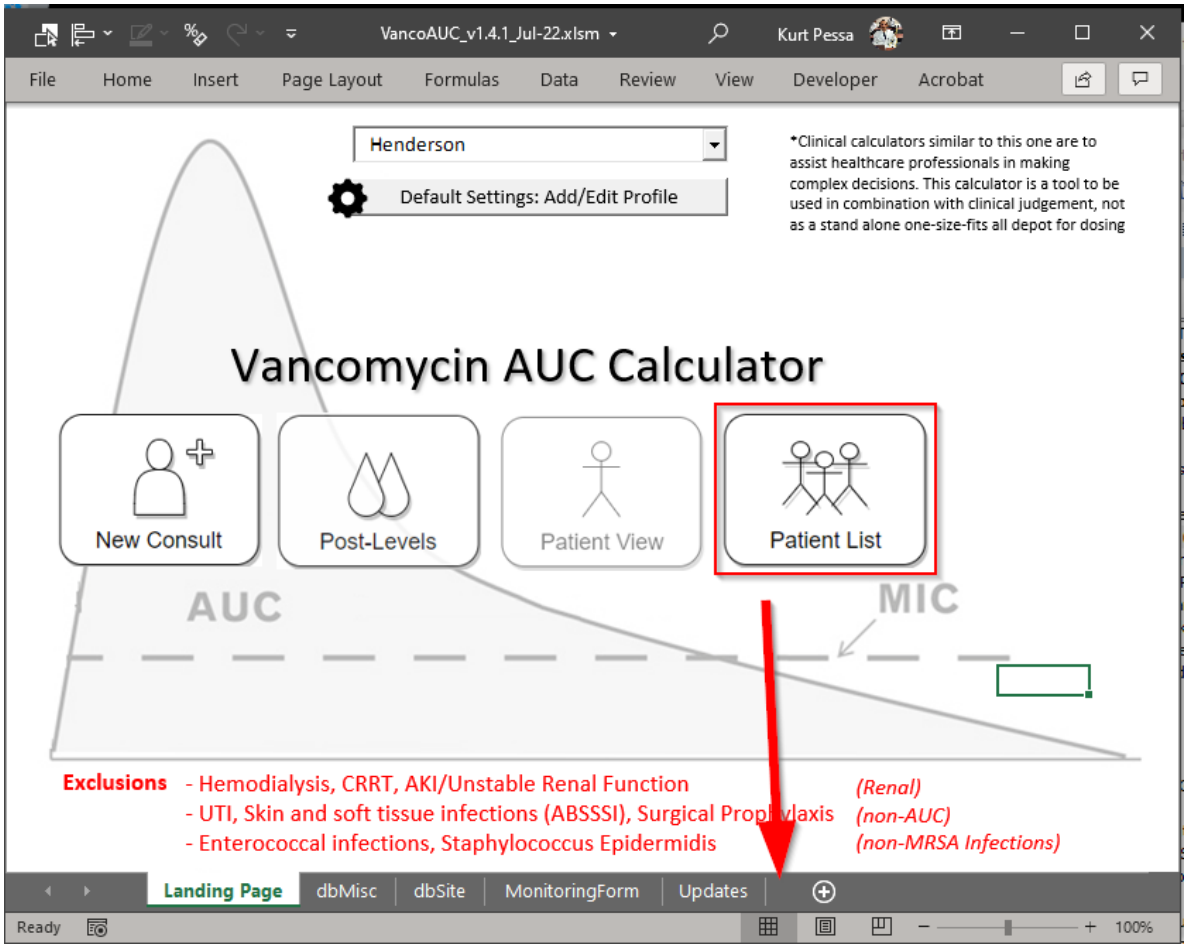
> 1. When entering post-dose levels... Is it possible to add the calculated pt specific AUC for the current dose in the progress note?
>
>   This way it shows why the dose is being either increased or decreased.
>
>   Currently, it only provides the estimated new AUC based on the new vancomycin dose.

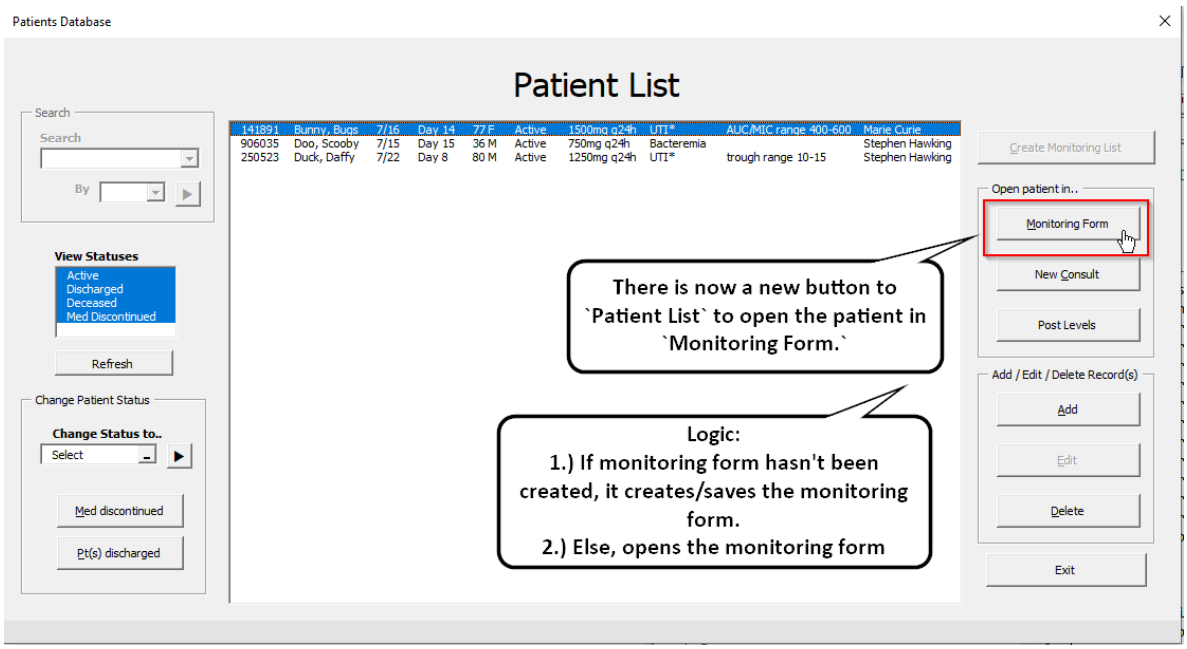


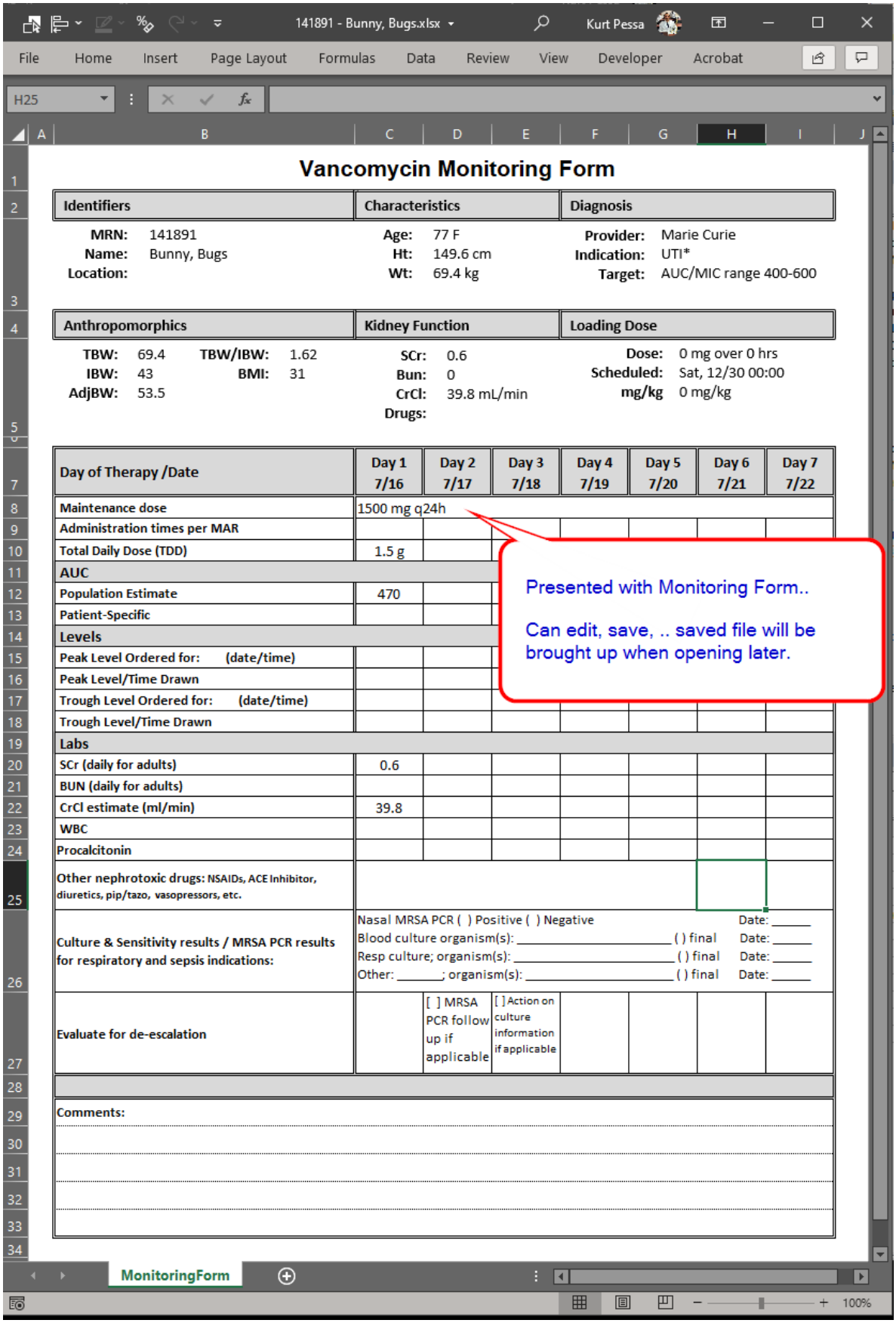
3.) Tried to incorporate `Monitoring Form` into calculator with more accessibility

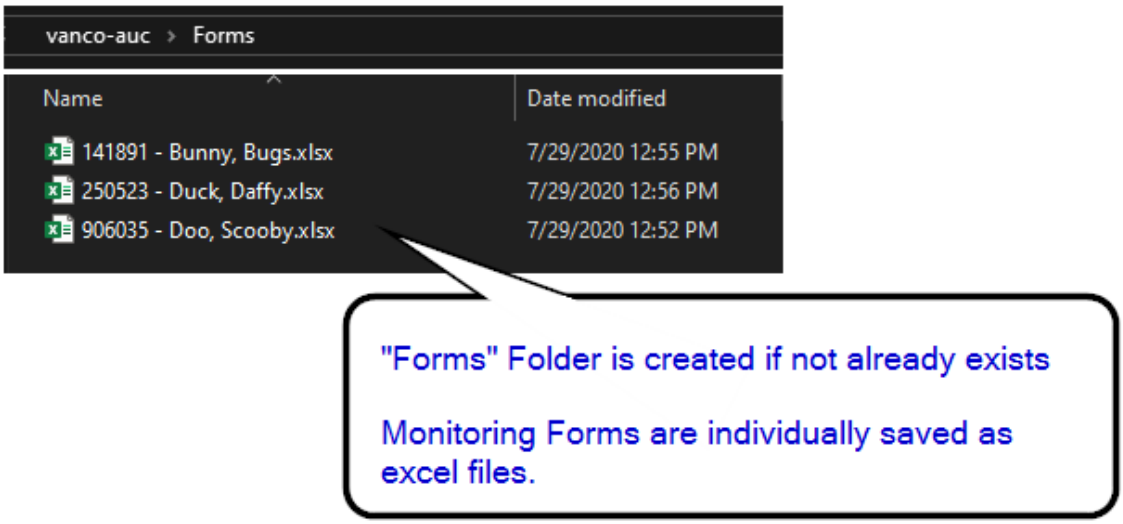
☑ Tried to incorporate "Monitoring Form" digitally into calculator.

1. When looking at the `Patient List`


VancoAUC_v1.4.1_Jul-22.xlsm
Kurt Pessa
File
Home
Insert
Page Layout
Formulas
Data
Review
View
Developer
Acrobat
Henderson
Default Settings: Add/Edit Profile
*Clinical calculators similar to this one are to assist healthcare professionals in making complex decisions. This calculator is a tool to be used in combination with clinical judgement, not as a stand alone one-size-fits all depot for dosing
Vancomycin AUC Calculator
New Consult
Post-Levels
Patient View
Patient List
AUC
MIC
Exclusions
- Hemodialysis, CRRT, AKI/Unstable Renal Function
- UTI, Skin and soft tissue infections (ABSSSI), Surgical Prophylaxis
- Enterococcal infections, Staphylococcus Epidermidis
(Renal)
(non-AUC)
(non-MRSA Infections)
Landing Page
dbMisc
dbSite
MonitoringForm
Updates
Ready
100%


Patients Database
Patient List
Search
Search
By
View Statuses
Active
Discharged
Deceased
Med Discontinued
Refresh
Change Patient Status
Change Status to..
Select
Med discontinued
Pt(s) discharged
141891 Bunny, Bugs 7/16 Day 14 77 F Active 1500mg q24h UTI* AUC/MIC range 400-600 Marie Curie
906035 Doo, Scooby 7/15 Day 15 36 M Active 750mg q24h Bacteremia Stephen Hawking
250523 Duck, Daffy 7/22 Day 8 80 M Active 1250mg q24h UTI* trough range 10-15 Stephen Hawking
Create Monitoring List
Open patient in..
Monitoring Form
New Consult
Post Levels
Add / Edit / Delete Record(s)
Add
Edit
Delete
Exit
There is now a new button to `Patient List` to open the patient in `Monitoring Form.`
Logic:
1.) If monitoring form hasn't been created, it creates/saves the monitoring form.
2.) Else, opens the monitoring form


141891 - Bunny, Bugs.xlsx
Kurt Pessa
File Home Insert Page Layout Formulas Data Review View Developer Acrobat
H25
Vancomycin Monitoring Form
Identifiers
MRN: 141891
Name: Bunny, Bugs
Location:
Characteristics
Age: 77 F
Ht: 149.6 cm
Wt: 69.4 kg
Diagnosis
Provider: Marie Curie
Indication: UTI*
Target: AUC/MIC range 400-600
Anthropomorphics
TBW: 69.4
TBW/IBW: 1.62
IBW: 43
BMI: 31
AdjBW: 53.5
Kidney Function
SCr: 0.6
Bun: 0
CrCl: 39.8 mL/min
Drugs:
Loading Dose
Dose: 0 mg over 0 hrs
Scheduled: Sat, 12/30 00:00
mg/kg 0 mg/kg
Day of Therapy /Date
Day 1 7/16
Day 2 7/17
Day 3 7/18
Day 4 7/19
Day 5 7/20
Day 6 7/21
Day 7 7/22
Maintenance dose
1500 mg q24h
Administration times per MAR
Total Daily Dose (TDD)
1.5 g
AUC
Population Estimate
470
Patient-Specific
Levels
Peak Level Ordered for: (date/time)
Peak Level/Time Drawn
Trough Level Ordered for: (date/time)
Trough Level/Time Drawn
Labs
SCr (daily for adults)
0.6
BUN (daily for adults)
CrCl estimate (ml/min)
39.8
WBC
Procalcitonin
Other nephrotoxic drugs: NSAIDs, ACE Inhibitor, diuretics, pip/tazo, vasopressors, etc.
Culture & Sensitivity results / MRSA PCR results for respiratory and sepsis indications:
Nasal MRSA PCR ( ) Positive ( ) Negative Date: _____
Blood culture organism(s): _____ ( ) final Date: _____
Resp culture; organism(s): _____ ( ) final Date: _____
Other: _____; organism(s): _____ ( ) final Date: _____
Evaluate for de-escalation
[ ] MRSA PCR follow up if applicable
[ ] Action on culture information if applicable
Comments:
Presented with Monitoring Form..
Can edit, save, .. saved file will be brought up when opening later.
MonitoringForm
100%


vanco-auc
Forms
Name
Date modified
141891 - Bunny, Bugs.xlsx
7/29/2020 12:55 PM
250523 - Duck, Daffy.xlsx
7/29/2020 12:56 PM
906035 - Doo, Scooby.xlsx
7/29/2020 12:52 PM
"Forms" Folder is created if not already exists
Monitoring Forms are individually saved as excel files.