

7/9 Follow-up - Fix to CrCl calculation logic

Faulty CrCl calculation logic

From Lynsee:

I thought the Creatinine clearance calc was working but I found an issue.

We were going through another of the test patients – Pat 3 has TBW<IBW. So it should use ABW to calculate and it looks it would be doing that via the equation. But if you actually calculate that out, it comes to 89ml/min, the 105.9ml/min results if you use the 75.3kg IBW number. Thanks again!!

MRN: 56789 Name: Name, No Location: Med/Surg 612 Age: 59 M Ht: 180.3 cm	TBW: 63.3 kg IBW: 75.3 kg AdjBW: 70.5 kg TBW/IBW: 0.84 BMI: 19.5	SCr: 0.8 mg/dL CrCl: 105.9 mL/min	Population: Estimates Vd: 41.1 L Ke: 0.1117 t1/2: 6.2 hrs	DOT: Day 1 (-30 min)
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1. Pt Info | 2. Kidney Function | 3. LD | 4. Vd | 5. CLVanco | 6. MD | 7. Levels / Labs | 8. Progress Note

☐ Manually-Enter CrCl

4. Kidney Function

* SCr mg/mL [*click here*](#)

SCr Date (optional)

Other Nephrotoxic Drugs:

☐ Amputee

* Required if not manually-entering CrCl

Calculated CrCl

(140 - age {59}) * wt {63.3 kg}

----- * 0.85 = 105.9 mL/min

72 * SCr {0.8}

Pt is male, no correction made

Manually-Enter CrCl

mL/min

Cachectic / Muscle Wasting Check

Age: 59 years

SCr: 0.8 mg/mL

Would you like to round SCr up to 1.0?

Doses

7/08 16:00 - 1000 mg

7/09 04:00 - 1000 mg

7/09 16:00 - 1000 mg

7/10 04:00 - 1000 mg

Accept 105.9 mL/min as CrCl

Here's a screenshot from the updated calculator:

New Consult


MRN: 56789 TBW: 63.3 kg SCr: 0.8 mg/dl Indication: Sepsis (Unknown Source)
 Name: Case3, Patient IBW: 75.3 kg CrCl: 89 mL/min
 Location: Med/Surg 612 AdjBW: 70.5 kg
 Age: 59 M TBW/IBW: 0.84
 Ht: 180.3 cm BMI: 19.5

1. Pt Info 2. Kidney Function 3. LD 4. Vd 5. CLVanco 6. MD 7. Levels / Labs 8. Progress Note

☐ Manually-Enter CrCl

4. Kidney Function

SCr Date (optional)

* SCr 0.8 mg/mL  [*click here *](#)

Other Nephrotoxic Drugs:

☐ Amputee

* Required if not manually-entering CrCl

Next

Calculated CrCl

(140 - age {59}) * wt {63.3 kg} / 72 * SCr {0.8} = 89 mL/min

Pt is male, no correction made

Cachectic / Muscle Wasting Check

Age: 59 years
 SCr: 0.8 mg/mL

Would you like to round SCr up to 1.0?

Yes No

Fixed issue with CrCl calculation logic!

Cancel << Back Next >> Save

Problem

- It looks like I had had a $>$ greater than instead of a $<$ less than.

Fix

- Just switched the $>$ greater than to $<$ less than sign.

```
Else
  If pt.char.Weight < pt.char.IBW Then
    If RoundedUpSCr Then
      If pt.char.Gend = 'M' Then
        If pt.char.Gend = 'F' Then
```

I had a ">" before =/

Here's the updated code in the calculator:

```
' -----
' Procedure Name: CrCl
' Purpose: Purpose of this function is to calculate Creatinine
'          Clearance based off of the Cockcroft-Gault eqn
'
' Default: - Manually-entered CrCl takes precedence
'          - If SCr = 0 or not defined, return nothing or 0
'          - Use IBW as default
```

```

'
' Conditionals      (1) If ABW or TBW is < IBW, use ABW or TBW
'                  (2) If Pharmacist chooses AdjBW, use AdjBW
'                  (3) If Pharmacist chooses RoundedUpScr, use 1 for SCR
' -----
Public Function CrCl() As Double
    If ManuallyEnteredQ Then
        CrCl = ManuallyEnteredCrCl
    Else
        If SCR = 0 Then
            CrCl = 0
        Else
            If pt.char.Weight < pt.char.IBW Then
                If RoundedUpScr Then
                    If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age) *
pt.char.Weight / (72) * 1
                    If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age) *
pt.char.Weight / (72) * 0.85
                Else
                    If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age) *
pt.char.Weight / (72 * SCR) * 1
                    If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age) *
pt.char.Weight / (72 * SCR) * 0.85
                End If
            Else
                Select Case RoundedUpScr
                Case False
                    Select Case UsedAdjBW
                    Case False
                        If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age)
* pt.char.IBW / (72 * SCR) * 1
                        If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age)
* pt.char.IBW / (72 * SCR) * 0.85
                    Case True
                        If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age)
* pt.char.AdjBW / (72 * SCR) * 1
                        If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age)
* pt.char.AdjBW / (72 * SCR) * 0.85
                    End Select
                Case True
                    Select Case UsedAdjBW
                    Case False
                        If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age)
* pt.char.IBW / (72 * 1) * 1
                        If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age)
* pt.char.IBW / (72 * 1) * 0.85
                    Case True
                        If pt.char.Gender = "M" Then CrCl = (140 - pt.char.Age)
* pt.char.AdjBW / (72 * 1) * 1
                        If pt.char.Gender = "F" Then CrCl = (140 - pt.char.Age)
* pt.char.AdjBW / (72 * 1) * 0.85
                    End Select
                End Select
            End If
        End If
    End If
End Function

```

