

## Next Generation Hematology Workcell

Paperless automated results processing



- 1 Next Generation Hematology Workcell
- 2 Hematology Workcell Demonstration
- 3 Questions

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- 3 Questions

#### Next Generation Hematology WorkCell

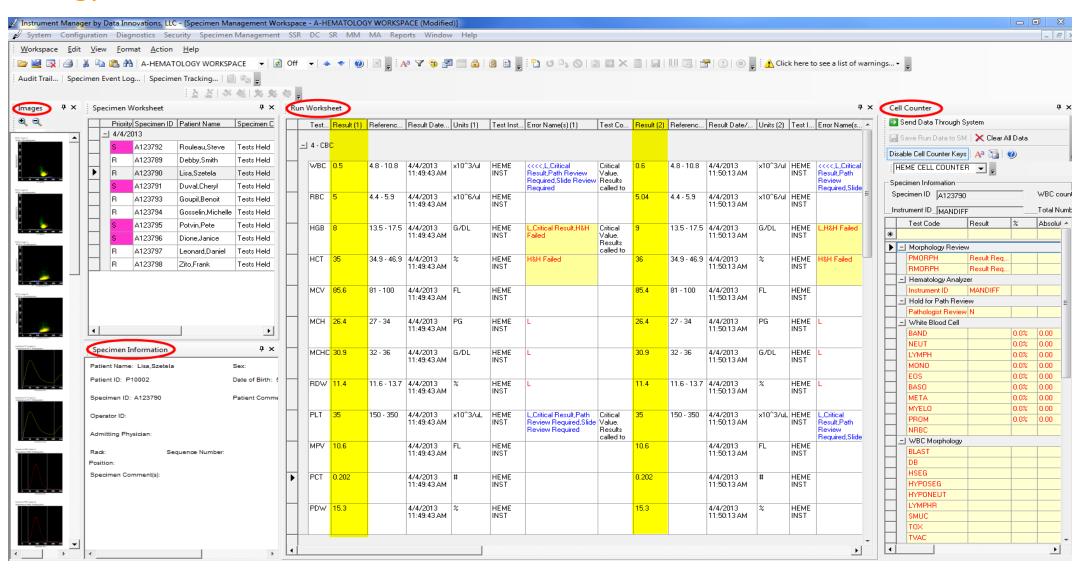
Available on Instrument Manager v8.12 or greater

- Holistic, automated, paperless Hematology WorkCell
  - Providing a vendor-neutral, that supports all major Hematology-instrument vendors
  - Support for multiple facilities of all sizes
  - New functions specifically for Hematology workflow including new screen functions
  - Minimized key strokes to release part or all the results
  - Secondary review to provide Pathologist or senior tech remote review capabilities.
  - Combined with autoverification rules provides one of the most advanced, automated Hematology WorkCell

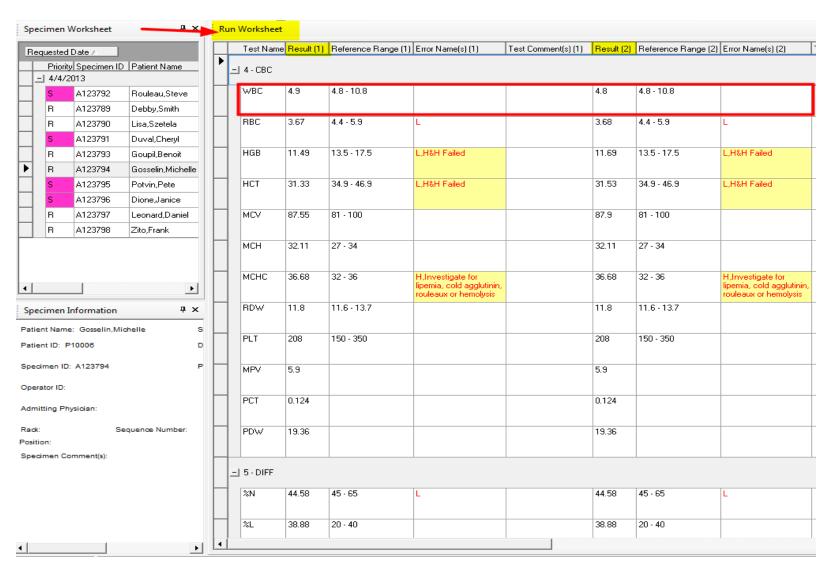
Two new Workspaces have been added

- Results Review/Edit/Release Run
  - New data presentation format
    - includes the new Run Worksheet pane, along with the Specimen Worksheet pane, and the Patient Information pane
- Hematology Workspace
  - Enhances hematology workflow
    - includes the new Run Worksheet pane integrated with the Specimen Worksheet & the Specimen Information panes
    - both the Cell Counter and Images panes are tabbed for easy access
    - tighter integration of Cell Counter with instrument runs

**Hematology Worksheet** 



#### Run Worksheet

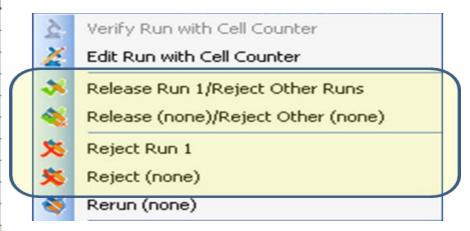


- Multiple instances of a specimen analysis are shown in columns rather than rows
  - Visual comparison of results from different runs is easily done

#### Run Worksheet

| Run | Worksheet | ] | Run 1      | 1                |                 |      | ] | Run 2      |                  |                 |
|-----|-----------|---|------------|------------------|-----------------|------|---|------------|------------------|-----------------|
| Т   | Test Name | 1 | Result (1) | Result Date/Time | Test Instrument | Erro |   | Result (2) | Result Date/Time | Test Instrument |
|     | WBC       | П | 6.2        | 5/20/2012 3:07:  | Beckman         |      | Γ | 6.2        | 6/20/2012 3:08:  | Beckman         |
|     | RBC       |   | 4.19       | 5/20/2012 3:07:  | Beckman         |      | Г | 4.17       | 6/20/2012 3:08:  | Beckman         |
|     | HGB       |   | 11.2       | 5/20/2012 3:07:  | Beckman         |      | Г | 11.2       | 6/20/2012 3:08:  | Beckman         |
|     | HCT       |   | 33         | 5/20/2012 3:07:  | Beckman         |      | Г | 33         | 6/20/2012 3:08:  | Beckman         |
|     | MCV       |   | 85.7       | 5/20/2012 3:07:  | Beckman         |      | Г | 85.7       | 6/20/2012 3:08:  | Beckman         |
|     | MCH       |   | 26.5       | 5/20/2012 3:07:  | Beckman         |      | Г | 26.4       | 6/20/2012 3:08:  | Beckman         |
|     | MCHC      |   | 31.2       | 5/20/2012 3:07:  | Beckman         |      | Г | 31.3       | 6/20/2012 3:08:  | Beckman         |
|     | PLT       |   | 207        | 5/20/2012 3:07:  | Beckman         |      | Г | 208        | 6/20/2012 3:08:  | Beckman         |
|     | MPV       |   | 10.5       | 5/20/2012 3:07:  | Beckman         |      | Г | 10.3       | 6/20/2012 3:08:  | Beckman         |
|     | RDW       |   | 11.3       | 5/20/2012 3:07:  | Beckman         |      | Г | 11.3       | 6/20/2012 3:08:  | Beckman         |
| Ξ   | DIFF      |   |            |                  |                 |      | Г |            |                  |                 |
| 7   | DIFF      | П |            | 5/20/2012 3:07:  | Beckman         |      | Г |            | 6/20/2012 3:08:  | Beckman         |
|     | NE%       |   | 58         | 5/20/2012 3:07:  | Beckman         |      | Г | 58         | 6/20/2012 3:08:  | Beckman         |
|     | LY%       |   | 34.4       | 5/20/2012 3:07:  | Beckman         |      | Г | 34.4       | 6/20/2012 3:08:  | Beckman         |
| 1   | M0%       |   | 5.22       | 6/20/2012 3:07:  | Beckman         |      | / | 5.22       | 6/20/2012 3:08:  | Beckman         |

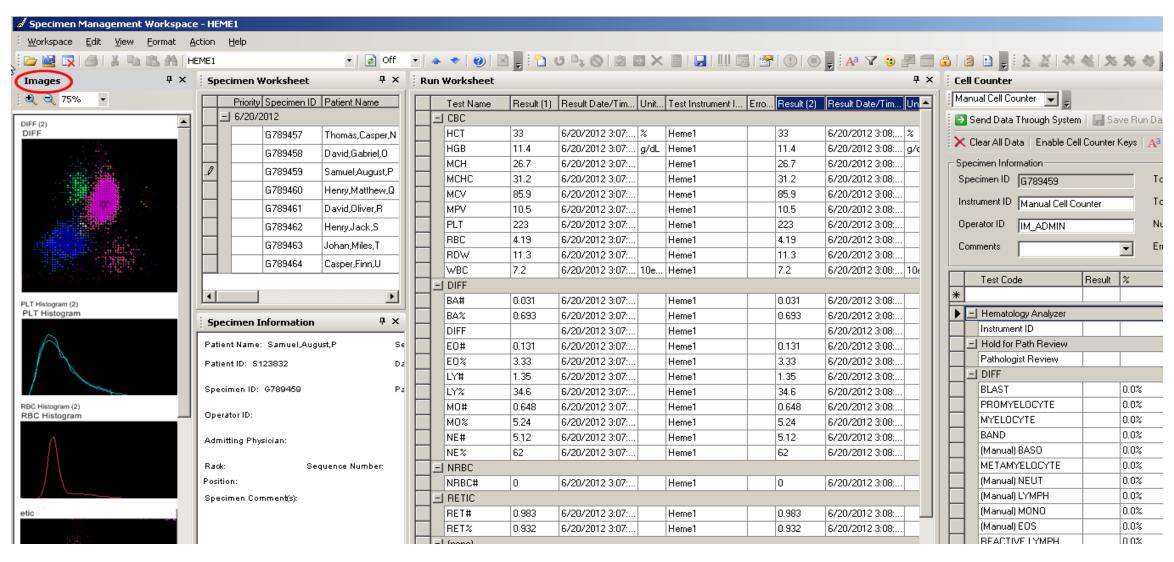
#### **New Actions added**



#### Data Presentation

- Multiple instances of a specimen analysis are shown in columns rather than rows
  - Test Results can be Released on the basis of "Run #"

Hematology Instrument Images

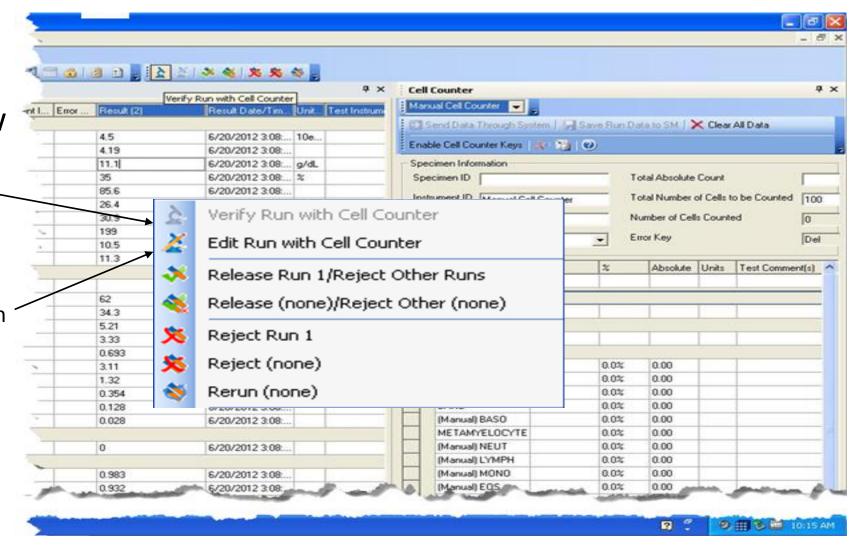


Run Worksheet – New Actions

 New actions have been added to aid hematology workflow

Verify Run with Cell Counter
 perform a manual
 differential

Edit Run with Cell Counter –
 edit a previously performed
 manual differential now with
 auto-update of differential
 absolute totals



**Cell Counter Integration** 

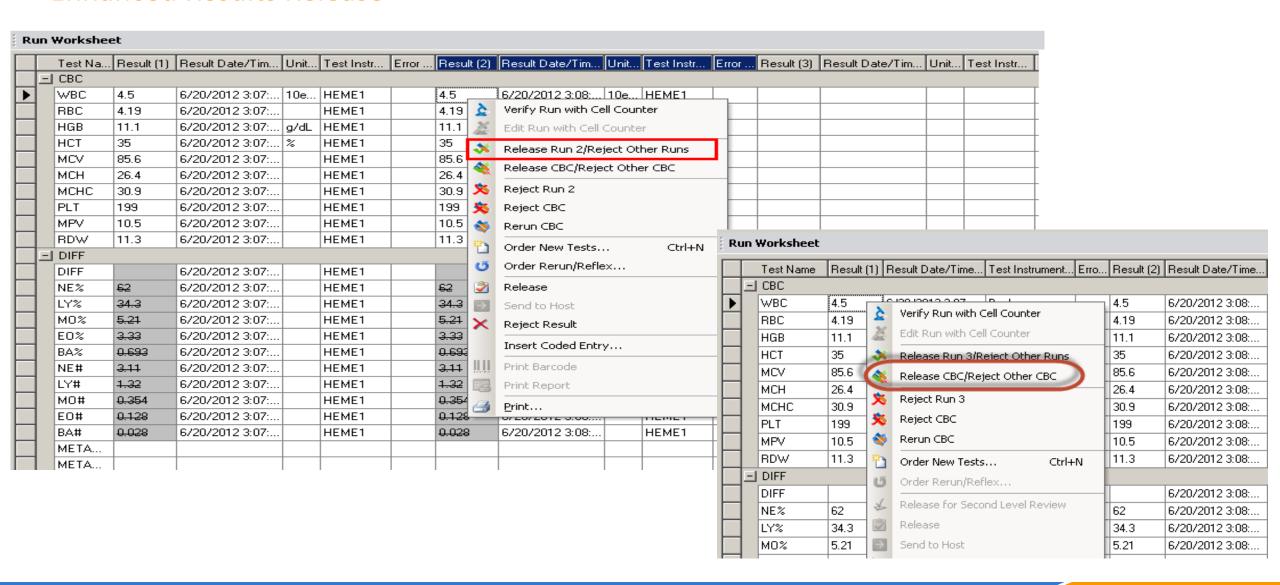
| n Works | heet           |                 |      |            |      |            |                 |      |           |      |      |          |                      |        |                |     |
|---------|----------------|-----------------|------|------------|------|------------|-----------------|------|-----------|------|------|----------|----------------------|--------|----------------|-----|
| Test N  | ame Result (1) | Result Date/Tim | Unit | Test Instr | Erro | Result (2) | Result Date/Tim | Unit | Test Inst | Erro | Resu | lt (3)   | Result Date/Tim      | Unit   | . Test Instrum | ner |
| _l CBC  |                |                 |      |            |      |            |                 |      |           |      |      |          |                      |        |                |     |
| WBC     | 7.2            | 6/20/2012 3:07: | 10e  | Heme1      |      | 7.2        | 6/20/2012 3:08: | 10e  | Heme1     |      |      |          |                      |        |                |     |
| RBC     | 4.19           | 6/20/2012 3:07: |      | Heme1      |      | 4.19       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                | _   |
| HGB     | 11.4           | 6/20/2012 3:07: | g/dL | Heme1      |      | 11.4       | 6/20/2012 3:08: | g/dL | Heme1     |      |      |          |                      |        |                | _   |
| HCT     | 33             | 6/20/2012 3:07: | %    | Heme1      |      | 33         | 6/20/2012 3:08: | %    | Heme1     |      |      |          |                      |        |                | _   |
| MCV     | 85.9           | 6/20/2012 3:07: |      | Heme1      |      | 85.9       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                | _   |
| MCH     | 26.7           | 6/20/2012 3:07: |      | Heme1      |      | 26.7       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                | _   |
| MCHC    | 31.2           | 6/20/2012 3:07: |      | Heme1      |      | 31.2       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                |     |
| PLT     | 223            | 6/20/2012 3:07: |      | Heme1      |      | 223        | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                | _   |
| MPV     | 10.5           | 6/20/2012 3:07: |      | Heme1      |      | 10.5       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                |     |
| RDW     | 11.3           | 6/20/2012 3:07: |      | Heme1      |      | 11.3       | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                |     |
| - DIFF  | ·              |                 |      |            |      |            | <u>'</u>        |      |           |      |      |          |                      |        | '              |     |
| DIFF    |                | 6/20/2012 3:07: |      | Heme1      |      |            | 6/20/2012 3:08: |      | Heme1     |      |      |          |                      |        |                | _   |
| NE%     | 62             | 6/20/2012 3:07: |      | Heme1      |      | 62         | 6/20/2012 3:08: |      | Heme1     |      | 62.0 |          | 7/13/2012 12:3       | %      | Manual Cell    | С   |
| LY%     | 34.6           | 6/20/2012 3:07: |      | Heme1      |      | 34.6       | 6/20/2012 3:08: |      | Heme1     |      | 32.0 |          | 7 14 0 1004 0 4 0 0  | ۰.     |                | -   |
| M0%     | 5.24           | 6/20/2012 3:07: |      | Heme1      |      | 5.24       | 6/20/2012 3:08: |      | Heme1     |      | 3.0  | 2        | Verify Run with Ce   |        |                |     |
| E0%     | 3.33           | 6/20/2012 3:07: |      | Heme1      |      | 3.33       | 6/20/2012 3:08: |      | Heme1     |      | 3.0  | <u>Z</u> | Edit Run with Cell ( | Counte | er .           |     |
| BA%     | 0.693          | 6/20/2012 3:07: |      | Heme1      |      | 0.693      | 6/20/2012 3:08: |      | Heme1     |      | 0.0  | *        | Release Run 3/Rej    | ect Ot | her Runs       |     |
| NE#     | 5.12           | 6/20/2012 3:07: |      | Heme1      |      | 5.12       | 6/20/2012 3:08: |      | Heme1     |      | 4.46 | 8        | Release DIFF/Reje    | ct Oth | er DIFF        |     |
| LY#     | 1.35           | 6/20/2012 3:07: |      | Heme1      |      | 1.35       | 6/20/2012 3:08: |      | Heme1     |      | 2.30 | **       |                      | _, _,, |                |     |
| мо#     | 0.648          | 6/20/2012 3:07: |      | Heme1      |      | 0.648      | 6/20/2012 3:08: |      | Heme1     |      | 0.22 | <b>X</b> | Reject Run 3         |        |                |     |
| EO#     | 0.131          | 6/20/2012 3:07: |      | Heme1      |      | 0.131      | 6/20/2012 3:08: |      | Heme1     |      | 0.22 | ×        | Reject DIFF          |        |                |     |
| BA#     | 0.031          | 6/20/2012 3:07: |      | Heme1      |      | 0.031      | 6/20/2012 3:08: |      | Heme1     |      | 0.00 | <b>*</b> | Rerun DIFF           |        |                |     |
| NRBC    | · ·            |                 |      |            |      |            |                 |      |           |      |      | -        | Order New Tests      |        | Ctrl+N         |     |
| NRBC    | # 0            | 6/20/2012 3:07: |      | Heme1      |      | 0          | 6/20/2012 3:08: |      | Heme1     |      |      | (5       | Order Rerun/Refle    |        |                |     |

**Cell Counter Integration** 

| Fest Na | . Result (1) | Result Date/Tim   | Unit | Test Instr | Error | Result (2) | Result Date/Tim | Unit | Test Inst | Error . | Result (  | <ol><li>Result Date/Tim   Ur</li></ol> | iit  Test Instr |
|---------|--------------|-------------------|------|------------|-------|------------|-----------------|------|-----------|---------|-----------|--|-----------------|
| CBC     |              |                   |      |            |       |            |                 |      |           |         |           |  |                 |
| WBC     | 4.5          | 6/20/2012 3:07:   | 10e  | HEME1      |       | 4.5        | 6/20/2012 3:08: | 10e  | HEME1     |         | -114 - 15 |  |                 |
| RBC     | 4.19         | 6/20/2012 3:07:   |      | HEME1      |       | 4.19       | 6/20/2012 3:08: |      | HEME1     | Kesi    | lits K    | ejected                                |                 |
| HGB     | 11.1         | 6/20/2012 3:07:   | g/dL | HEME1      |       | 11.1       | 6/20/2012 3:08: | g/dL | HEME1     |         |           |  |                 |
| HCT     | 35           | 6/20/2012 3:07:   | %    | HEME1      |       | 35         | 6/20/2012 3:08: | 9,   | HEME1     |         |           |  |                 |
| MCV     | 85.6         | 6/20/2012 3:07:   |      | HEME1      |       | 85.6       | 6/20/2012 5:08: |      | HEME1     |         |           | Deculée Dele                           |                 |
| MCH     | 26.4         | 6/20/2012 3:07:   |      | HEME1      |       | 26,4       | 6/20/2012 3:08: |      | HEME1     |         |           | Results Rele                           | ased            |
| MCHC    | 30.9         | 6/20/2012 3:07:   |      | HEME1      |       | 30.9       | 6/20/2012 3:08: |      | HEME1     |         |           |  |                 |
| PLT     | 199          | 6/20/2012 3:07:   |      | HE. "F     |       | 199        | 6/20/2012 3:08: |      | HEME1     |         | 1         | 11                                     |                 |
| MPV     | 10.5         | 6/20/2012 3:07    |      | HEME1      |       | 10.5       | 6/20/2012 3:08: |      | HEME1     |         |           |  |                 |
| RDW     | 11.3         | 6 P.S. 2012 3:07: |      | HEME1      |       | 11.3       | 6/20/2012 3:08: |      | HEME1     |         |           |  |                 |
| DIFF    |              |                   |      |            |       |            |                 |      |           | - 1     |           |  |                 |
| DIFF    |              | 6/20/2012 3:07:   |      | HEME1      |       |            | 6/20/2012 3:08: |      | HEME1     |         |           |  |                 |
| NE%     | 62           | 6/20/2012 3:07:   |      | HEME1      |       | 62         | 6/20/2012 3:08: |      | HEME1     |         | 62.0      | 7/12/2012 12:1 %                       | Manual C        |
| LY%     | 34.3         | 6/20/2012 3:07:   |      | HEME1      |       | 34.3       | 6/20/2012 3:08: |      | HEME1     |         | 34.0      | 7/12/2012 12:1 %                       | Manual C        |
| M0%     | 5.21         | 6/20/2012 3:07:   |      | HEME1      |       | 5.21       | 6/20/2012 3:08: |      | HEME1     |         | 2.0       | 7/12/2012 12:1 %                       | Manual C        |
| E0%     | 3.33         | 6/20/2012 3:07:   |      | HEME1      |       | 3.33       | 6/20/2012 3:08: |      | HEME1     |         | 1.0       | 7/12/2012 12:1 %                       | Manual C        |
| BA%     | 0.693        | 6/20/2012 3:07:   |      | HEME1      |       | 0.693      | 6/20/2012 3:08: |      | HEME1     |         | 0.0       | 7/12/2012 12:1 %                       | Manual C        |
| NE#     | 3.11         | 6/20/2012 3:07:   |      | HEME1      |       | 3.11       | 6/20/2012 3:08: |      | HEME1     |         | 2.79      | 7/12/2012 12:1                         | Manual C        |
| LY#     | 1.32         | 6/20/2012 3:07:   |      | HEME1      |       | 1.32       | 6/20/2012 3:08: |      | HEME1     |         | 1.53      | 7/12/2012 12:1                         | Manual C        |
| мо#     | 0.354        | 6/20/2012 3:07:   |      | HEME1      |       | 0.354      | 6/20/2012 3:08: |      | HEME1     |         | 0.09      | 7/12/2012 12:1                         | Manual C        |
| EO#     | 0.128        | 6/20/2012 3:07:   |      | HEME1      |       | 0.128      | 6/20/2012 3:08: |      | HEME1     |         | 0.05      | 7/12/2012 12:11:48 F                   | Manual C        |
| BA#     | 0.028        | 6/20/2012 3:07:   |      | HEME1      |       | 0.028      | 6/20/2012 3:08: |      | HEME1     |         | 0.00      | 7/12/2012 12:1                         | Manual C        |
| META    |              |                   |      |            |       |            |                 |      |           | - 1     | 0.05      | 7/12/2012 12:1                         |                 |
| META    |              |                   |      |            |       |            |                 |      |           | 1       | 1.0       | 7/12/2012 12:1 %                       | -               |

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**Enhanced Results Release** 



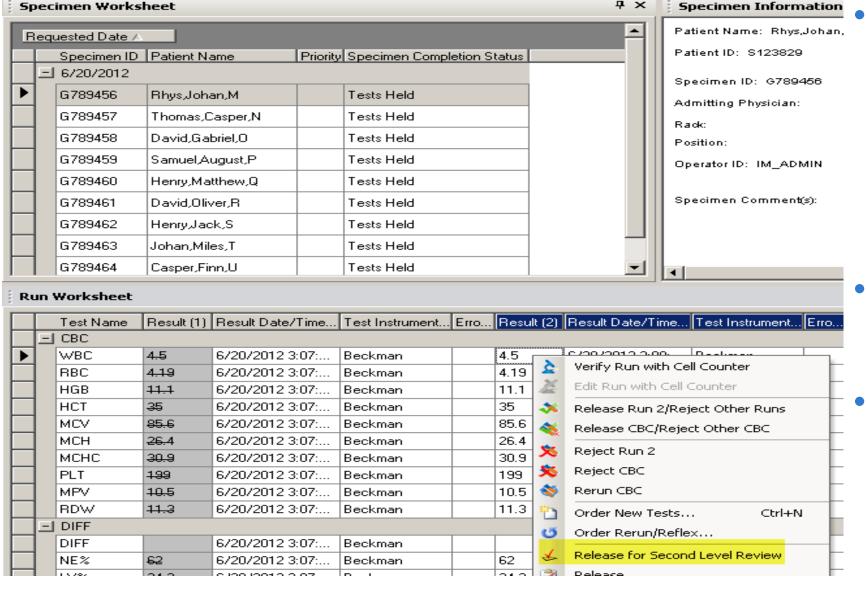
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**Enhanced Results Release** 

| Tast No. | Result (1)    | Result Date/Tim   | Lleit | Tast Instr | Error | Besult (2)    | Result Date/Tim   | Lleit | Tast Instr | Error | Besult (2)  | Result Date/Tim    | Lleit | Tastle |
|----------|---------------|-------------------|-------|------------|-------|---------------|-------------------|-------|------------|-------|-------------|--------------------|-------|--------|
| CBC      | riesult (1)   | mesuit Date/Tilli | Ornc  | Test msu   | Elloi | mesuit (2)    | mesuit Date/Tilli | Oriic | rest msu   | Elloi | riesult (3) | riesuit Date/Tilli | OTIIC | restin |
| WBC      | 4.5           | 6/20/2012 3:07:   | 10e   | HEME1      |       | 4.5           | 6/20/2012 3:08:   | 10e   | НЕМЕ1      |       |             |                    |       |        |
| RBC      | 4.19          | 6/20/2012 3:07:   |       | HEME1      |       | 4.19          | 6/20/2012 3:08:   |       | HEME1      |       | +           |                    |       |        |
| HGB      | 11.1          | 6/20/2012 3:07:   | _     | HEME1      |       | 11.1          | 6/20/2012 3:08:   | g/dL  | HEME1      |       |             |                    |       |        |
| нст      | 35            | 6/20/2012 3:07:   | %     | HEME1      |       | 35            | 6/20/2012 3:08:   | %     | HEME1      |       |             |                    |       |        |
| MCV      | 85.6          | 6/20/2012 3:07:   |       | HEME1      |       | 85.6          | 6/20/2012 3:08:   |       | HEME1      |       |             |                    |       |        |
| мсн      | 26.4          | 6/20/2012 3:07:   |       | HEME1      |       | 26.4          | 6/20/2012 3:08:   |       | HEME1      | 1     |             |                    |       | 1      |
| мснс     | 30.9          | 6/20/2012 3:07:   |       | HEME1      | 1     | 30.9          | 6/20/2012 3:08:   |       | HEME1      | 1     |             |                    |       | 1      |
| PLT      | 199           | 6/20/2012 3:07:   |       | HEME1      |       | 199           | 6/20/2012 3:08:   |       | HEME1      |       |             |                    |       |        |
| MPV      | 10.5          | 6/20/2012 3:07:   |       | НЕМЕ1      |       | 10.5          | 6/20/2012 3:08:   |       | HEME1      |       |             |                    |       |        |
| RDW      | 11.3          | 6/20/2012 3:07:   |       | HEME1      |       | 11.3          | 6/20/2012 3:08:   |       | HEME1      |       |             |                    |       |        |
| DIFF     |               |                   |       |            | •     |               |                   |       | ·          |       |             |                    |       |        |
| DIFF     |               | 6/20/2012 3:07:   |       | HEME1      |       |               | 6/20/2012 3:08:   |       | HEME1      |       |             |                    |       |        |
| NE%      | <del>62</del> | 6/20/2012 3:07:   |       | HEME1      |       | <del>62</del> | 6/20/2012 3:08:   |       | HEME1      |       | 62.0        | 7/12/2012 12:1     | %     | Manua  |
| LY%      | 34.3          | 6/20/2012 3:07:   |       | HEME1      |       | 34.3          | 6/20/2012 3:08:   |       | HEME1      |       | 34.0        | 7/12/2012 12:1     | %     | Manua  |
| M0%      | 5.21          | 6/20/2012 3:07:   |       | HEME1      |       | 5.21          | 6/20/2012 3:08:   |       | HEME1      |       | 2.0         | 7/12/2012 12:1     | %     | Manua  |
| E0%      | 3.33          | 6/20/2012 3:07:   |       | HEME1      |       | 3.33          | 6/20/2012 3:08:   |       | HEME1      |       | 1.0         | 7/12/2012 12:1     | %     | Manua  |
| BA%      | 0.693         | 6/20/2012 3:07:   |       | HEME1      |       | 0.693         | 6/20/2012 3:08:   |       | HEME1      |       | 0.0         | 7/12/2012 12:1     | %     | Manua  |
| NE#      | 3.11          | 6/20/2012 3:07:   |       | HEME1      |       | 3.11          | 6/20/2012 3:08:   |       | HEME1      |       | 2.79        | 7/12/2012 12:1     |       | Manua  |
| LY#      | 1.32          | 6/20/2012 3:07:   |       | HEME1      |       | 1.32          | 6/20/2012 3:08:   |       | HEME1      |       | 1.53        | 7/12/2012 12:1     |       | Manua  |
| мо#      | 0.354         | 6/20/2012 3:07:   |       | HEME1      |       | 0.354         | 6/20/2012 3:08:   |       | HEME1      |       | 0.09        | 7/12/2012 12:1     |       | Manua  |
| EO#      | 0.128         | 6/20/2012 3:07:   |       | HEME1      |       | 0.128         | 6/20/2012 3:08:   |       | HEME1      |       | 0.05        | 7/12/2012 12:1     |       | Manua  |
| BA#      | 0.028         | 6/20/2012 3:07:   |       | HEME1      |       | 0.028         | 6/20/2012 3:08:   |       | HEME1      |       | 0.00        | 7/12/2012 12:1     |       | Manua  |
| МЕТА     |               |                   |       |            |       |               |                   |       |            |       | 0.05        | 7/12/2012 12:1     |       |        |
| META     |               |                   |       |            |       |               |                   |       |            |       | 1.0         | 7/12/2012 12:1     | %     | 1      |

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#### Multiple Level Result Review



Results can be released for second level review before being released to the

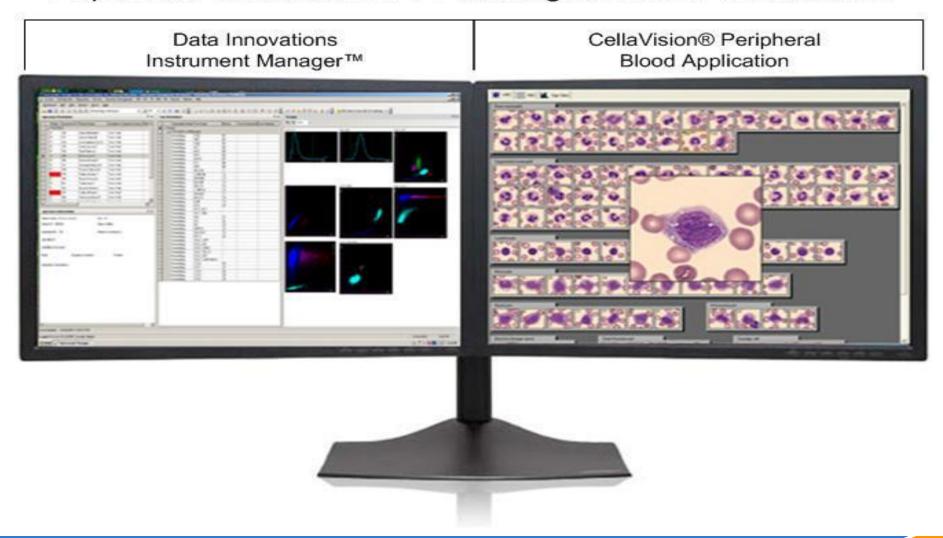
Specimen Information

User Security Tie-In

Rules can be configured to require second level review for certain test/result pairs if desired

# CellaVision<sup>TM</sup> Integration Tight integration for automated cell morphology

'Paperless' Slide Review / Pathologist Review Workstation



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#### Free Upgrades to Latest Release of Instrument Manager

- Further information and/or free upgrade
  - northamerica-sales@datainnovations.com
  - Tel: 802-658-2850
- If you have questions regarding support
  - northamerica-support@datainnovations.com
  - Tel: 802-658-1955

#### Hematology Autoverification Customer Success Story

www.datainnovations.com



Vancouver General Hospital, an 800 bed facility, achieved 95% Autoverification in Hematology and reduced turnaround time by 34% using Insturment Manager.

18

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3 Questions

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# Questions?

Thank you for your time!

20