Rembrandt – Release 1.5.5

Summary Test Report

# Test Overview

## Executive Summary

This test report summarizes the system and regression testing efforts for the Rembrandt version 1.5.5 Release and following tasks were completed.

* Verified **14** Feature Requests from the release scope. Of which **12** feature requests were implemented successfully and **2** were still open and move them to fix in the next release.
* Verified **14** existing bugs and **all** of them are closed in GForge.
* Discovered, fixed and verified **50** new bugs during all 7 iterations of the release. Of which **41** defects were closed and **9** of them were open. Disposition for open items to fix them in next release.
* A total of **41** functional test cases were written and newly identified bugs are created with detailed descriptions clear enough to understand both technical and non-technical people.
* QA Team executed total of **118** test cases of which **41** functional test cases and **77** regression test cases. **111** test cases were Passed successfully and **7** test cases were failed due to existing issues.
* During system and regression testing, QA team verified total of **78** GForge items in all 7 iterations and documented in GForge.

## Scope

This document is the Test Evaluation Summary for Rembrandt version 1.5.5. It compares the planned testing strategy and approach to the actual strategy and execution that QA Team used to validate the quality of this product prior to release.

The scope of Rembrandt Release 1.5.5 as follows:

| **GForge ID** | **Description** | **Type** | **Status** |
| --- | --- | --- | --- |
| 5645 | (Misc. New Features) Look into added functionality of sending emails to user when a query is finished for inbox. This may be out of scope until we have many more samples. | Feature Request | Closed |
| 5677 | (2.0) add a &quot;vs. rest of samples&quot; option | Feature Request | Closed |
| 6154 | Clinical Report display actual survival months | Feature Request | Closed |
| 11700 | re-resections set - An option for the user to filter and view the recurrence | Feature Request | Closed |
| 17783 | Advance Query Reports - Make the report more user friendly (Provide tool tip) | Feature Request | Closed |
| 19875 | Gene Alias validation - without clicking the 'check alias' | Feature Request | Closed |
| 21707 | Web genome performance issues - warning messages | Feature Request | Open |
| 23351 | Ability to Hide/Display Groups on KM Plot | Feature Request | Closed |
| 24337 | SNP Query performance | Feature Request | Closed |
| 24436 | Query no of resections in Rembrandt | Feature Request | Closed |
| 26120 | Option to Exclude Resections | Feature Request | Closed |
| 26121 | KM Plot & Resections | Feature Request | Closed |
| 26122 | Increase Size of Gene Entry Area | Feature Request | Closed |
| 27142 | Improve runtime error checking in Rembrandt to capture caArray Download status | Feature Request | Open |
| 5382 | The censor status in BRB archive file need to be updated | Bug | Closed |
| 16650 | Gene Expression data, karnofsky scores etc not displayed in the tag is RBT\_QA\_SPRINT2\_10JUN2008\_BUILD1 | Bug | Closed |
| 17055 | Report should display Specimen Name | Bug | Closed |
| 20935 | An error message is displayed when the 'Excel' icon is clicked on the results screen | Bug | Closed |
| 24308 | First click on Sample Identifier drop down selection not working | Bug | Closed |
| 24333 | Internal Server Error During Excel Download of All Genes Query | Bug | Closed |
| 24363 | Back link not functional on &amp;quot;No Records Returned. Please modify the query&amp;quot; page | Bug | Closed |
| 24375 | Kaplan-Meier Survival gene expression plot is not displayed in the first instance for some genes | Bug | Closed |
| 24401 | Description of the clinical sample query is generated only after the initial user action on sample report | Bug | Closed |
| 24460 | Spaces need to be inserted clinic plot headers "SurvivalvsAgeAtDx" & "KarnofskyScorevsAgeAtDx " | Bug | Closed |
| 24464 | Issues with Hierarchical Clustering analysis | Bug | Closed |
| 24478 | Radio button representing the base pair position should be below the cytoband option | Bug | Closed |
| 24498 | list boxes under "On Study therapy" section should be cleansed | Bug | Closed |
| 25836 | Typos and UI display issues in Rembrandt | Bug | Closed |

# Summary of Results

## Testing Approach

System and Regression testing was conducted to ensure Rembrandt Release 1.5.5 complied with the documented GForge feature requests and bugs. The results of the testing under each defined grouping of the test cases are listed in Appendix A.

The test schedule for system and regression testing on Rembrandt 1.5.5 builds as follows:

* RBT\_VER155\_22FEB2010\_BUILD1 – February 23rd to March 11th
* RBT\_VER155\_11MAR2010\_BUILD2 - March 12th to April 4th
* RBT\_VER155\_05APR2010\_BUILD31 - April 5th to April 11th
* RBT\_VER155\_12APR2010\_BUILD4 – April 12th to April 16th
* RBT\_VER155\_19APR2010\_BUILD5 - April 19th to May 3rd
* RBT\_VER155\_04MAY2010\_BUILD61 - May 4th to May 5th
* RBT\_VER155\_06MAY2010\_BUILD7 – May 6th to May 11th

During the system and regression testing following defects found in QA environment and documented in GForge.

**1st Build: RBT\_VER155\_22FEB2010\_BUILD1**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 26639 | Query type abbreviations not displaying for Gene Expression and Copy Number Analysis on View Results tab | Closed | 1 |
| 26647 | Issues on View Results tab -> Query Results | Closed | 2 |
| 26661 | For High Order Analysis, checking status... flashing in Query Results section | Closed | 1 |
| 26662 | Able to generate a query with invalid Gene keyword on second trial | Closed | 3 |
| 26692 | Internal Server error on excel downloading of a clinical study analysis report | Closed | 3 |
| 26693 | Previously generated query name(s) not displaying on View Results page | Closed | 4 |
| 26695 | Excel Download functionality not downloading all the selected samples | Closed | 4 |
| 26712 | Resection samples displaying on Gene Expression analysis on the selection of Exclude Re-Resection sets option | Closed | 4 |
| 26716 | Memory issue with gene pattern on QA tier | Open | 3 |
| 26724 | Internal Server Error on viewing clinical reports for KM survival plots | Closed | 4 |
| 26726 | TSC data missing in the download section | Open | 3 |
| 26736 | Generic warning message on Gene Keyword on Simple Search | Closed | 1 |
| 26746 | Inconsistent behavior of list boxes used to download caArray data | Open | 3 |
| 26786 | Invalid message display on Manually type list | Closed | 2 |
| 26881 | Issue with visualizing comparative marker selection job | Open | 3 |
| 26889 | Download job progresses in the background upon logout | Open | 2 |
| 27020 | Issue with Gene Pattern to invoke R | Open | 3 |

**2nd Build: RBT\_VER155\_11MAR2010\_BUILD2**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 27130 | Gene Symbol validation concatenating the last two invalid symbols | Closed | 4 |
| 27135 | Query Results E-mail cosmetic issues | Open | 1 |
| 27137 | Query Results URL does not work | Closed | 4 |
| 27214 | Hyperlink on query results email notification is not functional on IE browser | Closed | 5 |
| 27226 | Internal Server Error During Excel Download of All Genes Query on Copy Number Data Analysis | Closed | 4 |
| 27238 | Remove hyperlink on invalid gene symbols under Gene Symbol Alias Lookup | Open | 3 |
| 27239 | Query overwrite warning message displaying twice | Closed | 3 |
| 27245 | Invalid message on query results for unauthorized user | Closed | 2 |
| 27466 | Issue with clinical data search based on Karnofsky score | Closed | 3 |
| 27470 | Query Response getting poor by end of the day | Open | 3 |
| 27473 | User not able to delete PatientDID List, Gene List, and Reporter List | Closed | 4 |
| 27493 | Issue with Hierarchical Clustering Analysis elapsed time | Closed | 3 |
| 27494 | Gene Expression Query with Region criteria generates invalid warning message | Closed | 2 |
| 27501 | Able to generate Gene Expression and Copy Number data queries with single invalid gene symbol | Closed | 5 |

**3rd Build: RBT\_VER155\_05APR2010\_BUILD31**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 27906 | Able to generate a Gene Expression query with duplicate query name on second attempt | Closed | 3 |
| 27907 | &quot;Object Error&quot; message window displaying on viewing Preview Results of a Gene Expression query | Closed | 4 |
| 27926 | Elapsed time not updating for every 10 seconds while query running, | Closed | 3 |
| 27927 | Invalid message &quot;TypeError: $(&quot;checkAll&quot;) is  >undefined&quot; display on Gene Expression data per sample view report | Closed | 4 |
| 27928 | Gene Alias validation not performing for Preview Results | Closed | 3 |
| 27936 | Issue with adding Email to the User List Serve | Closed | 3 |
| 27940 | Downloaded Excel file containing Re-resection samples though 'Exclude Re-Resection Sets' check box selected | Closed | 4 |
| 27945 | Delete, Edit, Copy options (on the right pane) for a query not functional on View Results tab | Open | 2 |
| 27985 | Null message appearance on Class Comparison Analysis and never opened only on Firefox | Closed | 5 |
| 27988 | Principal Component Analysis not displaying for PC1vsPC2 on the first instance | Closed | 3 |

**4th Build: RBT\_VER155\_12APR2010\_BUILD4**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 28071 | Gene Expression Exclude Resections Tool tip missing content on the Help page | Closed | 4 |
| 28082 | Error produced on excel downloading of Class Comparison analysis | Closed | 3 |
| 28148 | KM plot Clinical report missing some of the resection samples | Closed | 3 |
| 28178 | Copy Number Data Analysis gene keyword validation message displaying though passing all valid genes | Closed | 4 |

**5th Build: RBT\_VER155\_19APR2010\_BUILD5**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 28344 | Internal Server Error During Excel Download of All Genes Query on Copy Number Data Analysis though cache cleared before selecting samples | Closed | 3 |
| 28345 | Query results URL from e-mail not hyper linking correctly if query name has spaces. | Closed | 3 |
| 28355 | Rembrandt user name is case-sensitive | Closed | 1 |

**6th Build: RBT\_VER155\_04MAY2010\_BUILD61**

| **GForge ID** | **Description** | **Resolution** | **Priority** |
| --- | --- | --- | --- |
| 28443 | Queries are not saving on private user session | Closed | 4 |
| 28446 | Able to generate Gene Expression and Copy Number queries with multiple invalid gene symbols | Closed | 3 |

QA Team developed and updated test cases in Microsoft Excel and is stored in SVN in the following location.

<https://gforge.nci.nih.gov/svnroot/caintegrator/caintegrator-spec/trunk/docs/caIntegrator/Test%20Plans/REMB%20Test%20Cases%20V1.0/>

The test cases were executed to ensure the Rembrandt version 1.5.5 software was functional and no existing issues.

## Risk

The QA team verified the scope of Rembrandt Release 1.5.5 and assigned defects to this release. Viewing processing reports and matching actual results with the expected results specified in the test cases.

At the completion of the testing phases, QA team reviewed, and as required, updated the test cases.

# Appendix A

|  |  |
| --- | --- |
| **Rembrandt Test Results Summary** | |
|  |  |
| **Test Date:** | 04/06/2010 to 04/19/2010 |
| **Test Tier:** | QA |
| **Build Number:** | RBT\_VER155\_12APR2010\_BUILD4 |
| **Release:** | Rembrandt 1.5.5 |
| **Test Platform:** | Windows XP/Firefox-Internet Explorer |

| **Test Case No.** | **Test Case Name** | **Overall Result** | **Firefox** | **IE** | **Defect ID** |
| --- | --- | --- | --- | --- | --- |
| **HomePage / Login / Logout** |  |  |  |  |  |
| 1 | Home Page | Pass | Pass | Pass |  |
| 2 | Rembrandt User List Serve | Pass | Pass | Pass |  |
| 3 | Login User | Pass | Pass | Pass |  |
| 4 | Register New User | Pass | Pass | Pass |  |
| 73 | Logout screen | Pass | Pass | Pass |  |
| **Simple Search** |  |  |  |  |  |
| 5 | SimpleSearch\_GE\_wildcard | Pass | Pass | Pass |  |
| 6 | SimpleSearch\_GE\_symbol | Pass | Pass | Pass |  |
| 7 | SimpleSearch\_KM\_GE\_wildcard | Pass | Pass | Pass |  |
| 8 | SimpleSearch\_KM\_GE\_symbol | Pass | Pass | Pass |  |
| 9 | SimlpleSearch\_KM\_CN\_symbol | Pass | Pass | Pass |  |
| 10 | SimpleSearch\_KM\_CN\_wildcard | Pass | Pass | Pass |  |
| 11 | SimpleSearch\_KM\_CN\_SNP | Pass | Pass | Pass |  |
| 12 | KM\_samplebased | Pass | Pass | Pass |  |
| **Advanced Search -- Gene Expression Analysis** |  |  |  |  |  |
| 70 | Finalize\_Page\_GE\_Query | Pass | Pass | Pass |  |
| 71 | Multiple Specimen | Pass | Pass | Pass |  |
| 13 | GE\_GeneSymbol | Pass | Pass | Pass |  |
| 14 | GE\_GeneSymbol(My workspace-managelist) | Pass | Pass | Pass |  |
| 15 | GE\_LL | Pass | Pass | Pass |  |
| 16 | GE\_LL\_(managelist) | Pass | Pass | Pass |  |
| 17 | GE\_AccNo | Pass | Pass | Pass |  |
| 18 | GE\_AccNo(managelist) | Pass | Pass | Pass |  |
| 19 | GE\_AllGene | Pass | Pass | Pass |  |
| 20 | GE\_Chr\_cytoband | Pass | Pass | Pass |  |
| 21 | GE\_Chr\_Physi\_Loc | Pass | Pass | Pass |  |
| 22 | CN\_Chr\_Physi\_Loc | Pass | Pass | Pass |  |
| 23 | GE\_CloneId&ProbesetId | Pass | Pass | Pass |  |
| 24 | GO Classification | Pass | Pass | Pass |  |
| 25 | GE\_caBIOPtw | Pass | Pass | Pass |  |
| 26 | GE\_KeggPtw | Pass | Pass | Pass |  |
| 27 | GE\_DiseaseType | Pass | Pass | Pass |  |
| 28 | GE\_FoldChange | Pass | Pass | Pass |  |
| **Advanced Search -- Copy Number Data Analysis** |  |  |  |  |  |
| 29 | CN\_geneSymbol | Pass | Pass | Pass |  |
| 30 | CN\_gene\_list | Pass | Pass | Pass |  |
| 31 | CN\_LL | Pass | Pass | Pass |  |
| 32 | CN\_Webgenome | Fail | Fail | Fail |  |
| 33 | CN\_LL\_List | Pass | Pass | Pass |  |
| 34 | CN\_Acc | Pass | Pass | Pass |  |
| 35 | CN\_Acc\_List | Pass | Pass | Pass |  |
| 36 | CN\_All\_gene | Pass | Pass | Pass |  |
| 37 | CN\_Chr\_cytoband | Pass | Pass | Pass |  |
| 38 | CN\_Chr\_Physi\_Loc | Pass | Pass | Pass |  |
| 39 | CN\_dbSNP | Pass | Pass | Pass |  |
| 40 | CN\_dbSNP\_List | Pass | Pass | Pass |  |
| 41 | CN\_ProbeSetId | Pass | Pass | Pass |  |
| 42 | CN\_Probeset\_List | Pass | Pass | Pass |  |
| 43 | CN\_SampleIDs\_List | Pass | Pass | Pass |  |
| 44 | CN\_SampleIDs | Fail | Fail | Fail |  |
| 45 | CN\_DiseaseType | Pass | Pass | Pass |  |
| 46 | CN\_CopyChange | Pass | Pass | Pass |  |
| **Advanced Search -- Clinical Study Analysis** |  |  |  |  |  |
| 47 | Clinical\_Age | Pass | Pass | Pass |  |
| 48 | Clinical\_Gender | Pass | Pass | Pass |  |
| 49 | Clinical\_Race | Pass | Pass | Pass |  |
| 50 | Clinical\_SurvivalRange | Pass | Pass | Pass |  |
| 51 | Clinical\_SampleID | Pass | Pass | Pass |  |
| 52 | Clinical\_Evaluation | Pass | Pass | Pass |  |
| 53 | Clinical\_DiseaseType | Pass | Pass | Pass |  |
| 54 | Clinical\_PriorTherapy | Pass | Pass | Pass |  |
| 55 | Clinical\_OnStudyTherapy | Pass | Pass | Pass |  |
| **Higher Order Analysis - Class Comparison Analysis** |  |  |  |  |  |
| 57 | HOA\_CCA\_default\_1 | Pass | Pass | Pass |  |
| 58 | HOA\_CCA\_default\_2 | Fail | Fail | Fail | 24399 |
| 59 | HOA\_CCA\_adv\_1 | Pass | Pass | Pass |  |
| 60 | HOA\_CCA\_adv\_2 | Fail | Fail | Fail | 24399 |
| 61 | CCA\_ResultPage\_test | Pass | Pass | Pass |  |
| 62 | CCA\_FC\_neg | Fail | Fail | Fail | 24399 |
| 63 | CCA\_T\_F\_Wilcoxin | Fail | Fail | Fail | 24399 |
| **Higher Order Analysis - Principal Component Analysis** |  |  |  |  |  |
| 64 | HOA\_PCA\_default | Pass | Pass | Pass |  |
| 65 | HOA\_PCA\_adv | Pass | Pass | Pass |  |
| **Higher Order Analysis - Hierarchical Clustering Analysis** |  |  |  |  |  |
| 66 | HOA\_HCA\_default | Pass | Pass | Pass |  |
| 67 | HOA\_HCA\_adv | Pass | Pass | Pass |  |
| **Higher Order Analysis - Gene Pattern** |  |  |  |  |  |
| 56 | HOA\_GenePattern | Fail | Fail | Fail | 17757 |
| 68 | HOA\_SD\_GP | Pass | Pass | Pass |  |
| 69 | HOA\_GT\_GP | Pass | Pass | Pass |  |
| **Download** |  |  |  |  |  |
| 72 | Download | Pass | Pass | Pass |  |
| **Users** |  |  |  |  |  |
| 74 | HENRY\_FORD\_USER | Pass | Pass | Pass |  |
| 75 | TJU\_User | Pass | Pass | Pass |  |
| 76 | HENRY\_FORD\_TJU | Pass | Pass | Pass |  |
| 77 | Public\_User | Pass | Pass | Pass |  |