

We advise you to store this Bulletin with the applicable User Manual.

Possible Incorrect Optimization Result Following Uncertainty Change

Product: Monaco®

Date: November 2024

Reference number (Field Change Order, FCO): 382-05-MON-058

Field Corrective Action number (FCA), if applicable: NA

Relates To: MONJ-15683

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| Scope: | <p>Monaco customers running 6.2.2 and above using the original Monte Carlo dose calculation algorithm (XVMC only).</p> <p>This product bulletin does not apply to Collapsed Cone or GPUMCD calculations, including Unity calculations.</p> |
| Description: | <p>If the calculation uncertainty is changed following optimization, the dose will be removed and the option to reperform stage 2 optimization will be available. If this option is selected, then the dose values used within the Monaco optimizer will be incorrectly scaled during evaluation of the IMRT cost functions. The incorrect dose scaling will only become apparent within the GUI following the final dose calculation. The resulting plan will not have correctly solved the optimization problem. This issue only affects optimizations and calculations performed with the XVMC algorithm.</p> <p>Though the result is not desirable, the segments, dose, and monitor units are all in agreement. The plan will not satisfy the optimization criteria, and the Dose Volume Histogram (DVH) and Isoeffects will not appear as expected.</p> <p>The plan still needs to go through the approval process and will not be approved if the desired result is not attained. In all cases the delivered dose will agree with the dose displayed.</p> |

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| Solution: | <p>If the problem occurs:</p> <ul style="list-style-type: none"> - Re-set the optimization to the beginning of Stage 1 and re-start it using the final desired uncertainty for XVMC dose calculation, or - Unload, reload and optimize from scratch. <p>To avoid the problem altogether:</p> <ul style="list-style-type: none"> - Do not change the XVMC dose calculation uncertainty and then continue the optimization, or - Recalculate after the uncertainty is changed and do no further optimization. <p>The problem will be resolved in a future Monaco release.</p> |
| Technical reference: | NA |
| Contact: | If you have any queries about this Notice, please contact your local Elekta office. |