Customer Release Notes

This document describes the following:

- Changes to Treatment Planning System (TPS) since the most recent release of the TPS user manual (E0920-00003 Rev A, released July 19, 2019).

- Changes to Treatment Delivery System (TDS) since the most recent release of the TDS user manual (E0920-00004 Rev A, released July 19, 2019).

- Known issues and workarounds.

1. Compatibility:

Zap-X software is a set of major software components. These release notes are for the following versions:

- Treatment Planning Software: v1.7.41.

- Treatment Delivery Software: v1.7.38.

- Treatment Delivery Control Service Software: v1.7.38.

- System Database Software: v1.7.13.

2. Treatment Planning Software Changes

Listed by feature. Within each feature, changes are listed more recent first:

- **Automatic Head Center**:
    - The location of the table within the CT image is now automatically determined, and the head center is set accordingly. It is still possible to set the head center manually, as before.

- **Import/Export**:
    - **Data update:** Additional information has been added to an exported plan that may, in a future release, support moving plans between systems.
    - Bug fixes:
        - Contour export did not work when patient name was missing.
        - Contour import did not work for long contour names

- **Report**:
    - **Report Version:** The plan report now shows the version of TPS that was used when the plan was approved, not the version at the time the report was displayed. This applies to plans moving forward.
    - **Beam Dose/Fraction:** The expected MU for each beam is now shown by fraction.
    - Bug fixes:
        - The estimated treatment time for multi-fraction plans has been corrected.
        - The order of isocenters in the report now matches the order in the UI display.

- **Contouring:**

    - **Water Equivalent:** A new type of contour will change the CT density to water density inside the contour.

- **Misc**:
    - Bug fixes:
        - Remove redundant patient pictures. If a patient's CT and MR had different patient ID's it results in 2 separate patients in the database. The system allows the user to pick 1 patient ID and move both series to that patient, but this left behind a patient with the other ID that had no images. Those empty patients are now removed.
        - Simulation plan showed incorrect MU when plan had multiple paths.

3.   Treatment Delivery Changes:

Most Recent Changes

- **Daily QA Workflow:** The daily QA screen has been updated to focus on four workflow goals. There are now separate tabs for each of:
    - Daily QA
    - Steel Ball test (modified Winston Lutz)
    - F-Bracket tests
    - Water tank tests

    For each of these tabs there are sub-tabs for Table/Gantry and for dose delivery. The options on each of these screens varies depending on the workflow.

- **Report:** The report shows the date/time of each fraction.

Earlier Changes:
Listed by feature. Within each feature, changes are listed more recent first:

- **Report**:

  - The SW version shown in the report is the version used to deliver the plan, not the version at the time of showing the report (applies to plans moving forward.

- **Alignment**:

  - **Faster Align:** A new KV generator mode allows faster KV imaging. Among other benefits this will allow an axial alignment to happen in about half the time.

  - **Optional Auto-Align**: It is now optional to perform an auto-align between isocenters. To bypass the auto-align step, simply press the right-arrow instead of the auto-align icon when the system moves to a new isocenter.

- **MV Imager**:

  - A fully red MV image now corresponds to the fully planned dose, whether that dose is small or large.

  - The MV graph on the lower right now auto scales.

- **Steel Ball Test**:
  (aka modified Winston-Lutz test)

  - Ongoing improvements in the steel-ball detection algorithm.

  - Test results analyzed on the system, with an emailed report.

  - Support for any collimator size.

  - HV automatically enables during the steel ball test.

- **Pendant**:

  - **Pendant Reliability**: There were several changes to the pendant software to improve overall performance and reliability.

- **Misc**:

  - **Table motion:** The insert and extract of the patient table is now smoother and faster.

4. Known issues and workarounds

- **Imported contour display:** Imported contours may not be displayed on the coronal or sagittal display. They will display correctly on the axial display. (3673)
- **Multiple Undo/Redo:** During a planning session, the system can become inoperable if undo/redo are pressed multiple times in succession. This can be prevented by using the original control to undo an action. (3953)
- **Scanner Lock Up**: The safety zone scanner can lock-up if somebody enters the safety area for about 3 seconds, exits, and then re-enters the safety area for 5 minutes. If this happens the scanner must be physically reset. (4239)