With the use of the Tissue-Tek jeopardizing the diagnosis. Rework or at a maximum could lead to tissue loss at microtomy, cross-contamination. Technicians must be diligent to reduce the cassette must be reopened, subjecting the tissue to the risk of being embedding technician. This process involves multiple risks. Each cores may become tangled or break. If tissues are grossed too thick, this process may be incomplete, leaving “raw,” uninfiltrated tissue that may require reprocessing. After processing, the responsibility for proper orientation lies with the grosser must take care not to submit tissues that is accustomed to them. Eight (8) relevant quality issues for processes at embedding were recorded: “Tissue under-processed, clips/staples/sutures in tissue, unreadable barcode, tissue chunked out, improper orientation, cassette received opened, no tissue in cassette after processing, section too large for base mold.” During the 6-month evaluation, the laboratory tracked 99,112 cassettes. After the implementation and validation of the Parafom Cassettes and the AutoTEC a20, the laboratory tracked the same group of issues for 6 months. During these 6-months, the laboratory tracked 105,373 cassettes. The pre- and post-implementation data sets were evaluated. The percentage change in quality issue occurrences after implementation of the new process was calculated to determine the effects on quality when implementing an automated embedding system. Materials & Methods The quality issues of tissues, their orientation, and cassette status were compared between the traditional manual embedding process and the automated process using Paraform Cassettes and the AutoTEC a20. A hospital laboratory evaluated the quality issue occurrences for six (6) months using their current validated manual embedding process that was accustomed to them. Eight (8) relevant quality issues for processes at embedding were recorded: “Tissue under-processed, clips/staples/sutures in tissue, unreadable barcode, tissue chunked out, improper orientation, cassette received opened, no tissue in cassette after processing, section too large for base mold.” During the 6-month evaluation, the laboratory tracked 99,112 cassettes. After the implementation and validation of the Parafom Cassettes and AutoTEC a20 automated system solution, the laboratory tracked the same group of issues for 6 months. During these 6-months, the laboratory tracked 105,373 cassettes.

Conclusions After a 1-year evaluation involving 204,485 blocks, the implementation of the automated embedding solution utilizing the Paraform Cassettes and the AutoTEC a20 demonstrated a substantial decrease in quality issue occurrences of 44% in the new process compared to the traditional, manual embedding process, creating safer, higher-quality, and more predictable blocks. Results After implementing the automated embedding solution, the quality issues decreased by 44% overall. Besides barcode readability, the count of all issue occurrences decreased even though the number of total blocks increased by 6%. Every quality characteristic recorded saw a significant percentage decrease when comparing the actual counts to the total blocks counted, including the unreadable barcodes (4%). Cassettes opening during processing or no tissue evident after processing decreased by 44% and 64%, respectively. Improper orientations were reduced by 85%. Under-processed tissues, a significant quality issue causing lengthy rework, was reduced by 75%, and tissues being too large for the base mold was completely eliminated. Non-embedding related issues like clips/staples/sutures and tissue chunked out at microtomy were reduced 8% and 31%, respectively (Figure 1).