

Milestone Biobanking Processing

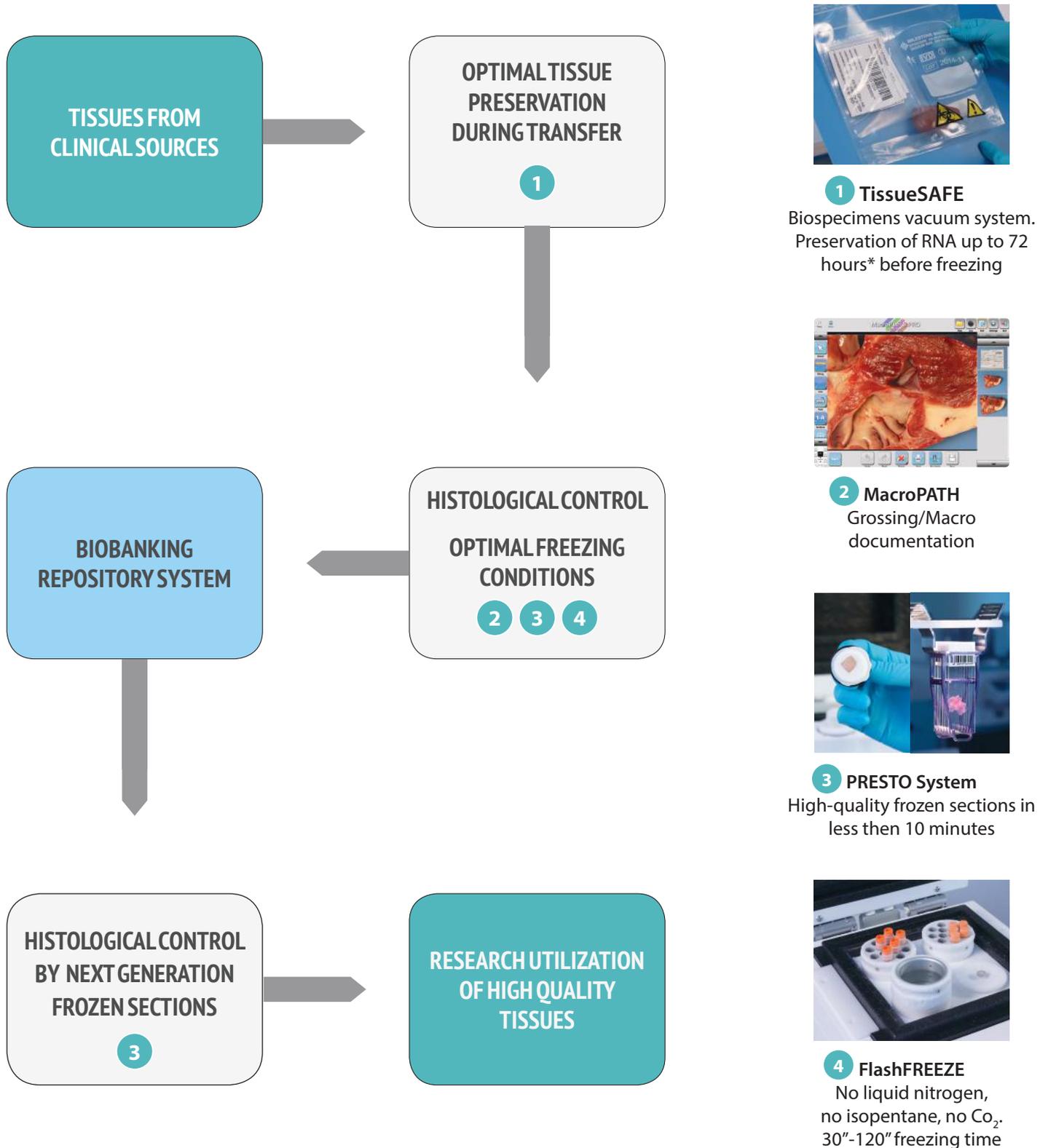
Standardized. Documented



MILESTONE
HELPING
PATIENTS

Milestone Biobanking Processing

Taking care of your biospecimens quality from pre-analytical conditions to research utilization



*Tissue transfer to pathology labs: under vacuum is the safe alternative to formalin
Bussolati et al - Virchows Arch DOI 10.1007/s00428-007-0529-x

1 COLLECTION/TRANSFER

TissueSAFE is an innovative vacuum system which solves the problem of eliminating formalin in the operating theatre and allows a controlled formalin-free transfer of biospecimens to the laboratory. Immediately after excision, specimens are transferred to an adjacent room where the TissueSAFE ^{1,2} is installed.

Tissue is placed into sterilized specimen bags and sealed under vacuum. The sealed specimen bag is then placed into a refrigerated transfer box at 4 °C.

A dedicated data logger can be activated at the start of the shift and then placed into the transfer box to continuously monitor and document tissue temperature and transfer time from the surgery suite to the histology lab. Specimens arrive as “fresh” to the laboratory. Fixation procedures can now start under controlled conditions in the laboratory.



European Patent: EP 2 070 410 B1
US Patent: US 8,110,346B1

Benefits

- No formalin fumes.
- Specimens are held in “as fresh” conditions.
- No spilling.
- Original specimen colors are preserved.
- Drying of tissues is eliminated.
- Autolytic process is slowed down.

¹ Tissue transfer to pathology labs: under vacuum is the safe alternative to formalin. G. Bussolati, L. Chiusa, A. Cimino, G. D'Armento. *Virchows Arch.* (2008) 452:229-231

² Vacuum-based preservation of surgical specimens: An environmentally-safe step towards a formalin-free hospital
Di Novi C, Minniti D, Barbaro S, Zampirolo MG, Cimino A, Bussolati G. *Sci Total Environ.* 2010 Jul 15; 408(16):3092-5.

2 GROSSING/MACRO DOCUMENTATION

The new **MacroPath pro-x** is a user-friendly, high-resolution image capture system that can either be mounted to fit any existing grossing workstation or used as a stand-alone resource. Selected high-resolution images can be used to supplement synoptic or preformatted reports that provide essential data of clinical relevance.

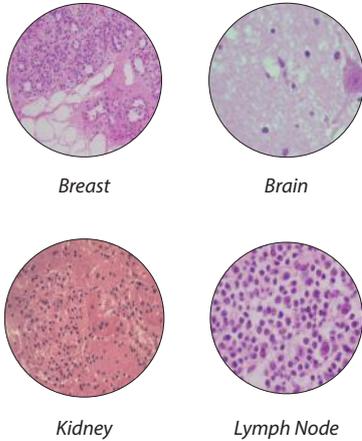
In the Grossing Room:

- A major visual complement to standard descriptions.
- Availability of images eliminates vagueness in description of shape, size and color of specimens.
- Eliminates hand drawings or long descriptions.
- Enables detailed observation and documentation through 10x optical magnification.
- Rapid and accurate sizing/area of specimens.
- Easy and precise labeling of tissue block sample locations.
- Full documentation of specimen “as received”.

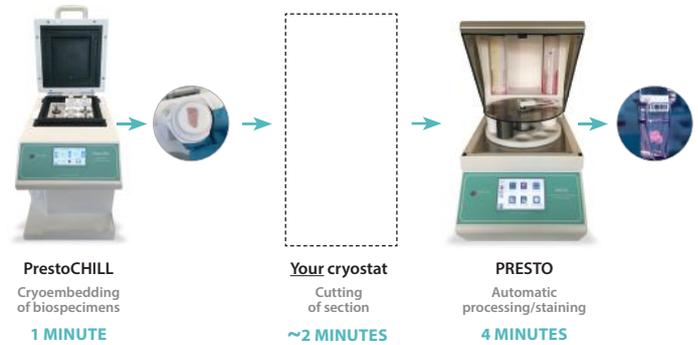


3 NEXT GENERATION FROZEN SECTIONS

From fresh biospecimen to stained, high-quality, frozen sections in less than **10 minutes**.



The goal of high-quality frozen sections can be reached by combining the advanced cryoembedding techniques of **PrestoCHILL**, with the first automated processor/stainer, **PRESTO**.



4 FLASH FREEZING

The irreproducibility of many reported biomarkers is due at least in part to the fact that the biospecimens utilized are often procured using different collection, processing and storage techniques.³ Such variability can lead to significant differences in biospecimen molecular integrity. To overcome some of these difficulties Milestone has developed the FlashFREEZE unit to standardize the flash freezing processing step of biospecimen. With **FlashFREEZE** it is now possible to run evidence-based biospecimens freezing protocols with the full documentation needed for QA purposes.



- NO LIQUID NITROGEN**
- NO ISOPENTANE**
- PRESET FREEZING TIME
- FULL DOWNLOADABLE DOCUMENTATION

³ International Approaches to Advancing Biospecimen Science. Helen M. More et al. Cancer Epidemiol Biomarkers Prev. May 2011; 20(5): 729-732

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