Advancing breast tissue analysis unfolds through a meticulously orchestrated methodology, each step aimed at refining the CODA framework. The foundational step involves the global alignment of breast tissue, achieved by rigid-body registration. The translation and rotation matrix, derived using the Radon transform with cross-correlation, create a unified reference frame for subsequent analyses. Building on global alignment, the methodology progresses to an area-specific refinement. A multi-point grid is strategically placed over target and origin images, initiating nuanced area-specific alignment. A sophisticated cost function, guiding overlay with the warped image, undergoes iterative optimization through gradient descent, honing the alignment on a localized scale. This process captures nuances within breast tissue, ensuring a precise and detailed reconstruction. Following alignment procedures, the methodology integrates cell detection, unveiling the cellular landscape. This process, executed through standardized color values or deep neural networks like ResNet50, yields precise coordinates for individual cells. These coordinates form the foundation for constructing a comprehensive 3D matrix and image, revealing mammary gland spatial intricacies at a cellular level. Inspired by CODA's success in pancreatic tumorigenesis, the improvement approach draws guidance from the detailed reconstruction of 13 resected pancreas tissue samples. The methodology quantifies tissue volume and cell count, offering insights into compositional changes during tumorigenesis. Exploration of microarchitectural properties sheds light on pancreatic precancer complexities, providing a framework for breast tissue analysis refinement. Methodological innovations refine the CODA framework. The adoption of log polar transformation for initial global alignment emerges as a pivotal modification, offering an alternative to the conventional Radon transform. This alteration enhances alignment accuracy and efficiency, ensuring a robust foundation for subsequent analyses.