ABSTRACT Early detection or screening examination of breast cancer can be done using Optical Tomography and Boundary Element Method. We can not make measurements or precisely define boundary conditions on the surface between breast and chest. A few models which uses an extension of the definition area to other tissues surrounding the breast are discussed. Among them model containing infinite boundary elements which allows us to reduce the mesh and to avoid the problem of setting incorrect boundary conditions on unavailable surface between breast and chest.

Keywords: Boundary Element Method, Infinite Elements, Optical Tomography