Multi-tasking Breast Density Classification

Breast cancer is one of the most common cancers in women and is the leading cause of female death from cancer in many developed countries. The disease usually metastasizes to distant organs such as bones, liver, lungs and brain, which is one of the main reasons why it is so difficult to cure. Breast density is an important indicator for assessing the health of the breast, which indicates the relative proportion of fat tissue to breast tissue in the breast. Studies have shown that higher breast density is associated with a relatively increased risk of breast cancer. Therefore, categorizing breast density can assist physicians in making diagnostic and therapeutic decisions about breast disease.

The multi-task breast density classification model can determine the BI-RADS grade of the molybdenum images and can output the percentage of dense tissue calculated based on the traditional method and predict its percentage of dense tissue based on the MRI examination. It provides physicians with more comprehensive information to better assist diagnosis and develop personalized treatment plans.

