NEWS

Deep Health – Patient Self-Pay for AI-Driven Enhanced Review Program in Screening Mammography: Initial Experience

PURPOSE

Though AI for screening mammography has garnered significant attention, adoption has been modest, perhaps in part because AI is not reimbursed. Some practices have elected to offer AI at additional cost, much like what was done when digital breast tomosynthesis was originally deployed. While quantification of benefit will require prospective controlled trials, and it is difficult to separate enrollment bias from the effectiveness of AI, we seek to share data from experience with initial implementations from several different practices that implemented a self-pay AI program.

METHODS AND MATERIALS

A self-pay AI-driven screening mammography program was deployed across 10 clinical practices ranging from a few sites up to 64 sites at the largest practice. Women who enrolled had FDA-cleared AI software applied to their mammogram and in relevant cases a safeguard review by a second interpreting radiologist. Cancer detection rate, recall rate and positive predictive value were calculated per practice using routine MQSA methodology.

RESULTS

Results were collected on 747,604 women who underwent screening mammography over a 12-month period and who were offered the option to pay for the AI-driven enhanced review. 23% of women chose to enroll, with the enrollment rate increasing over time (final month, 33% enrollment). The overall cancer detection rate was on average 43% higher for enrolled women vs unenrolled women (5.95 vs 4.15 per 1000). Overall, the recall rate was 21% higher for enrolled vs unenrolled women (10.9% vs 8.8%) and the positive predictive value (PPV1) was 15% higher (5.4% vs 4.6%). The higher PPV1 indicates each recall resulted in more cancer diagnoses in the enrolled population. All 10 practices saw a substantially higher CDR in enrolled women compared to unenrolled women.

CONCLUSIONS

Initial data shows significantly higher rates of cancers detected in a population enrolling in an AI-enhanced breast screening program. One limitation of these initial results is that the differences observed are a combination of the impact of the AI program and patient self-selection, this merits further research.

CLINICAL RELEVANCE/APPLICATIONS

Self-pay programs may be a way for patients to get access to AI-enhanced screening care that could result in more cancers detected early.