## Main search algorithm:

(()("Breast Neoplasms"[Mesh]) OR $(()(()(()(()(()(()(()(()(()(()(()(()((B r e a s t$ Neoplasm) OR (Neoplasm, Breast)) OR (Breast Tumors)) OR (Breast Tumor)) OR (Tumor, Breast)) OR (Tumors, Breast)) OR (Neoplasms, Breast)) OR (Breast Cancer)) OR (Cancer, Breast)) OR (Mammary Cancer)) OR (Cancer, Mammary)) OR (Cancers, Mammary)) OR (Mammary Cancers)) OR (Malignant Neoplasm of Breast)) OR (Breast Malignant Neoplasm)) OR (Breast Malignant Neoplasms)) OR (Malignant Tumor of Breast)) OR (Breast Malignant Tumor)) OR (Breast Malignant Tumors)) OR (Cancer of Breast)) OR (Cancer of the Breast)) OR (Mammary Carcinoma, Human)) OR (Carcinoma, Human Mammary)) OR (Carcinomas, Human Mammary)) OR (Human Mammary Carcinomas)) OR (Mammary Carcinomas, Human)) OR (Human Mammary Carcinoma)) OR (Mammary Neoplasms, Human)) OR (Human Mammary Neoplasm)) OR (Human Mammary Neoplasms)) OR (Neoplasm, Human Mammary)) OR (Neoplasms, Human Mammary)) OR (Mammary Neoplasm, Human)) OR (Breast Carcinoma)) OR (Breast Carcinomas)) OR (Carcinoma, Breast)) OR (Carcinomas, Breast) )) AND (((((((Primary) OR (Early)) OR (Operable)) OR (Resectable)) OR (Curable)) OR (Non-metastatic)) OR (Non-advanced))) AND (("Recombinational DNA Repair"[Mesh]) OR ((()((()(()(()((((Recombinational DNA Repair) OR (DNA Repair, Recombinational)) OR (Repair, Recombinational DNA)) OR (Recombinational Repair of DNA)) OR (DNA Recombinational Repair)) OR (Homologous Recombinational Repair)) OR (Homologous Recombinational Repairs)) OR (Recombinational Repair, Homologous)) OR (Repair, Homologous Recombinational)) OR (Homologous Recombination Repair)) OR (Recombination Repair, Homologous)) OR (Homologous Recombination Repair of DNA)) OR (Homologous Recombination DNA Repair)) OR (Recombination Repair)) OR (Repair, Recombination)) OR (Homologous Recombination Double-Stranded Break DNA Repair)) OR (Homologous Recombination Double Stranded Break DNA Repair)) OR (Homology-Directed dsDNA Break Repair)) OR (Homology Directed dsDNA Break Repair)))) AND ((((biomarkers) OR (biomarker)) OR (gene)) OR (protein))

## Sources:

## Total $\mathbf{N}=$

PubMed $\mathrm{N}=$
Cochrane Library $\mathrm{N}=$
EMBASE N =
OVID N =
Web of Science $\mathrm{N}=$
Other sources $\mathrm{N}=$
N records after duplications removed
N records after screening of titles and abstracts
N records after further evaluation ( N records were excluded for the following reasons:
Non-clinical studies; Patients with metastatic or advanced BC; No detection of HRD, wrong evaluation methods of HRD score, or other cutoff values; and Non-human studies)
N records included in qualitative synthesis
N records included in quantitative synthesis (meta-analysis)

