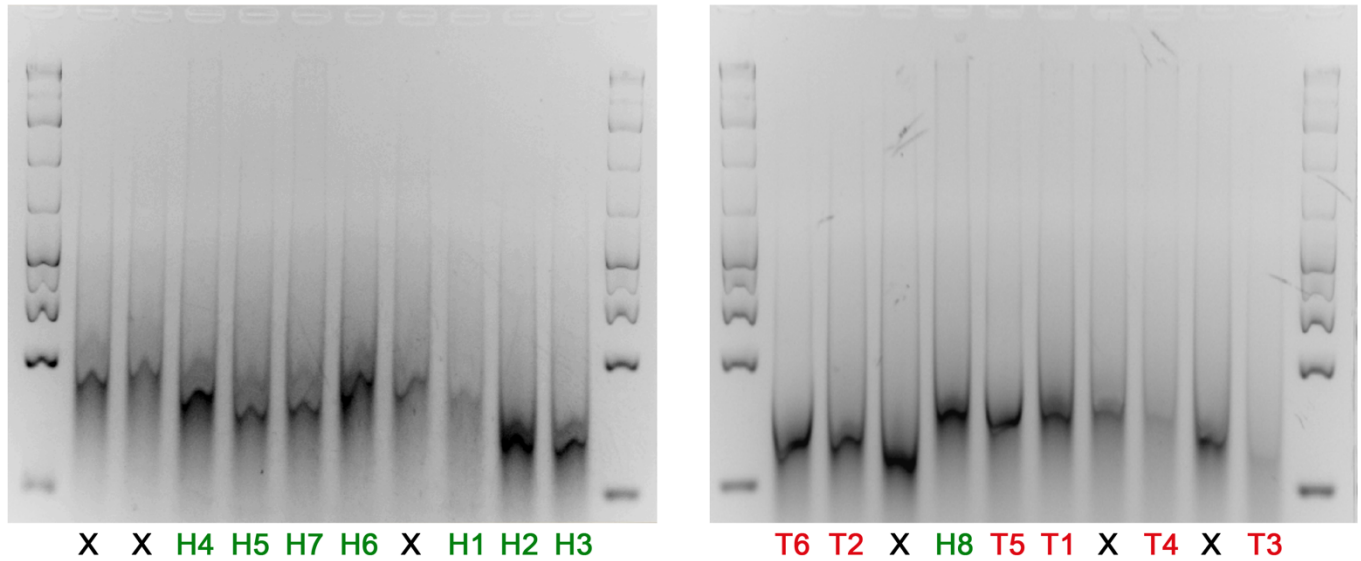


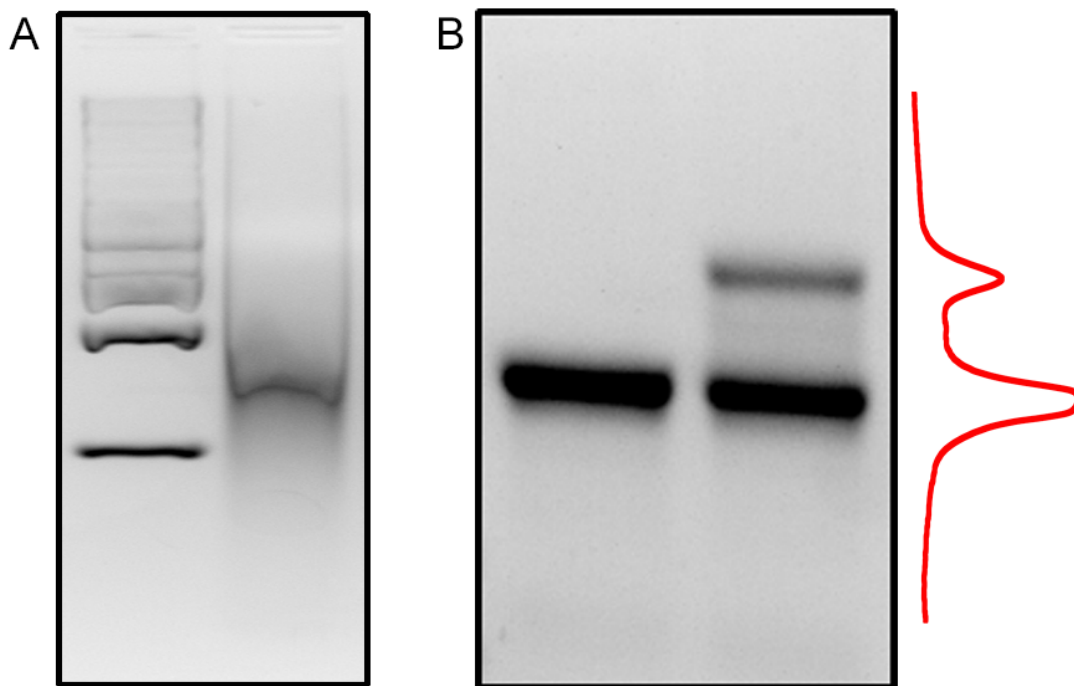
*Supplementary Information*

**Solid-state nanopore analysis of global 5-hydroxymethylcytosine content in healthy breast tissue and early-stage breast tumor tissue**

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**Supplementary Figure S1.** Full gels showing all sheared genomic DNA fragments probed in this study (see Figure 2a in manuscript). Healthy (H) and tumor (T) specimens are indicated at bottom. ‘X’ indicate material not used in this study. The ladders in the outside lanes are GeneRuler 1 kb Plus DNA Ladder (Thermo Fisher Scientific).



**Supplementary Figure S2.** (A) Gel image of fragmented genomic MCF7 DNA used in this study. The ladder is the GeneRuler 1 kb Plus DNA Ladder (Thermo Fisher Scientific). (B) Gel analysis of a 150 bp mono-5hmC DNA construct labeled simultaneous with MCF7 DNA labeling following enzymatic labeling both alone (lane 1) and with bound MS (lane 2). Band intensity analysis of lane 2 (right) indicated a labeling yield of 26%.