

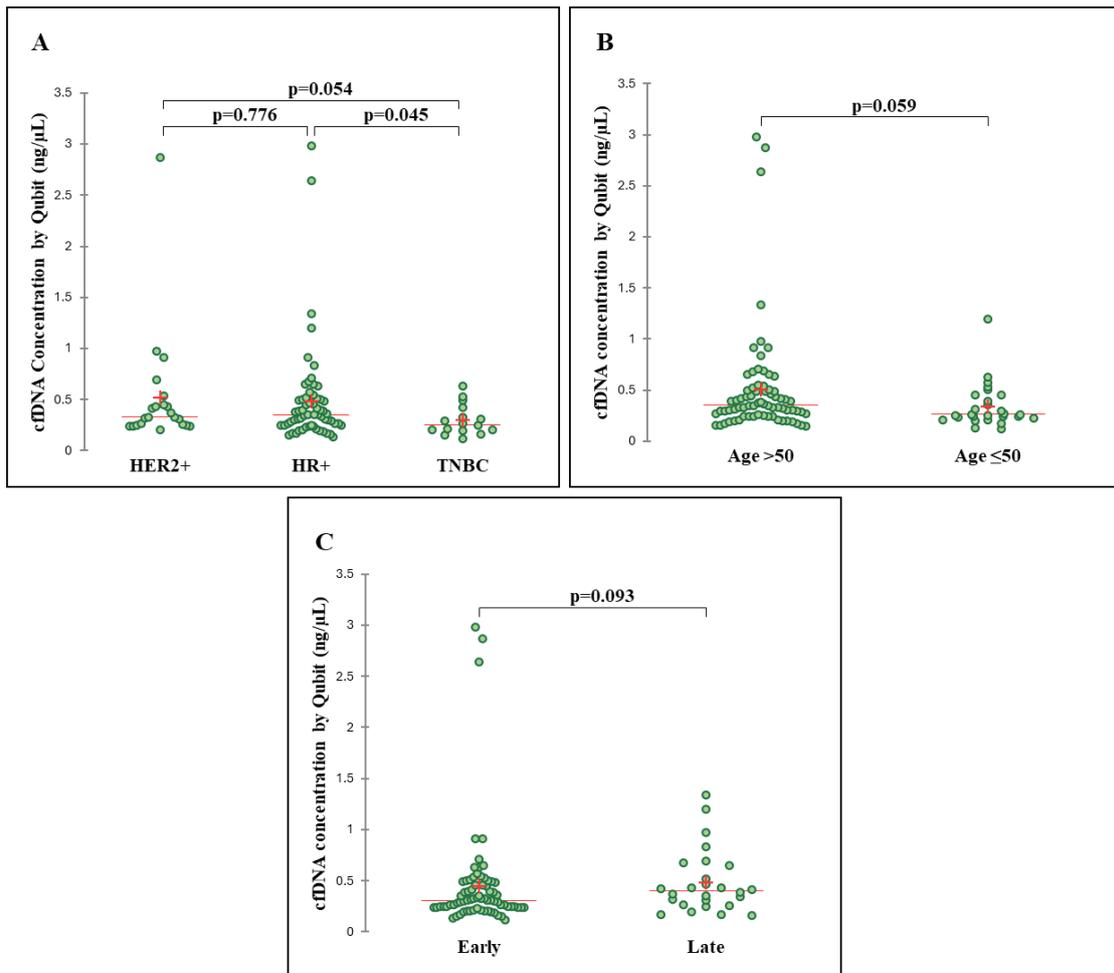
**Evaluating cell free DNA quantification and integrity in breast cancer using
fluorometric, electrophoretic and PCR based platforms**

Additional Table 1. Clinico-pathological characteristics of patients.

Variables	N=100	
Age	≤50	27
	>50	73
Subtype	HR+	62
	HER2+	22
	TNBC	16
Tumor Size	≤2 cm	38
	>2 cm	62
LN Status	Positive	38
	Negative	62
Grade	1	13
	2	53
	3	34
Clinical Stage	I	22
	II	52
	III	26

Additional Table 2. The plasma cfDNA concentration in BC patients.

	Tumor (ng/μL)	Control (ng/μL)	p Value
Qubit	0.459±0.473	0.252±0.107	<0.0001
TapeStation	0.156±0.186	0.090±0.054	0.0048
gDNA corrected	0.219±0.111	0.153±0.081	<0.0001



Additional Fig 1. Stratified analysis of cfDNA concentration in breast cancer patients. (a) cfDNA concentrations across molecular subtypes, demonstrating a trend toward higher cfDNA levels in HER2+ tumors, followed by HR+ and TNBC (overall comparison not statistically significant). (b) Comparison of cfDNA concentrations between patients aged ≤ 50 years and >50 years. Patients aged >50 years showed a trend toward higher cfDNA levels compared with those ≤ 50 years ($p = 0.059$). (c) cfDNA concentrations stratified by disease stage, showing a trend toward higher cfDNA levels in late-stage disease compared with early-stage disease ($p = 0.093$).