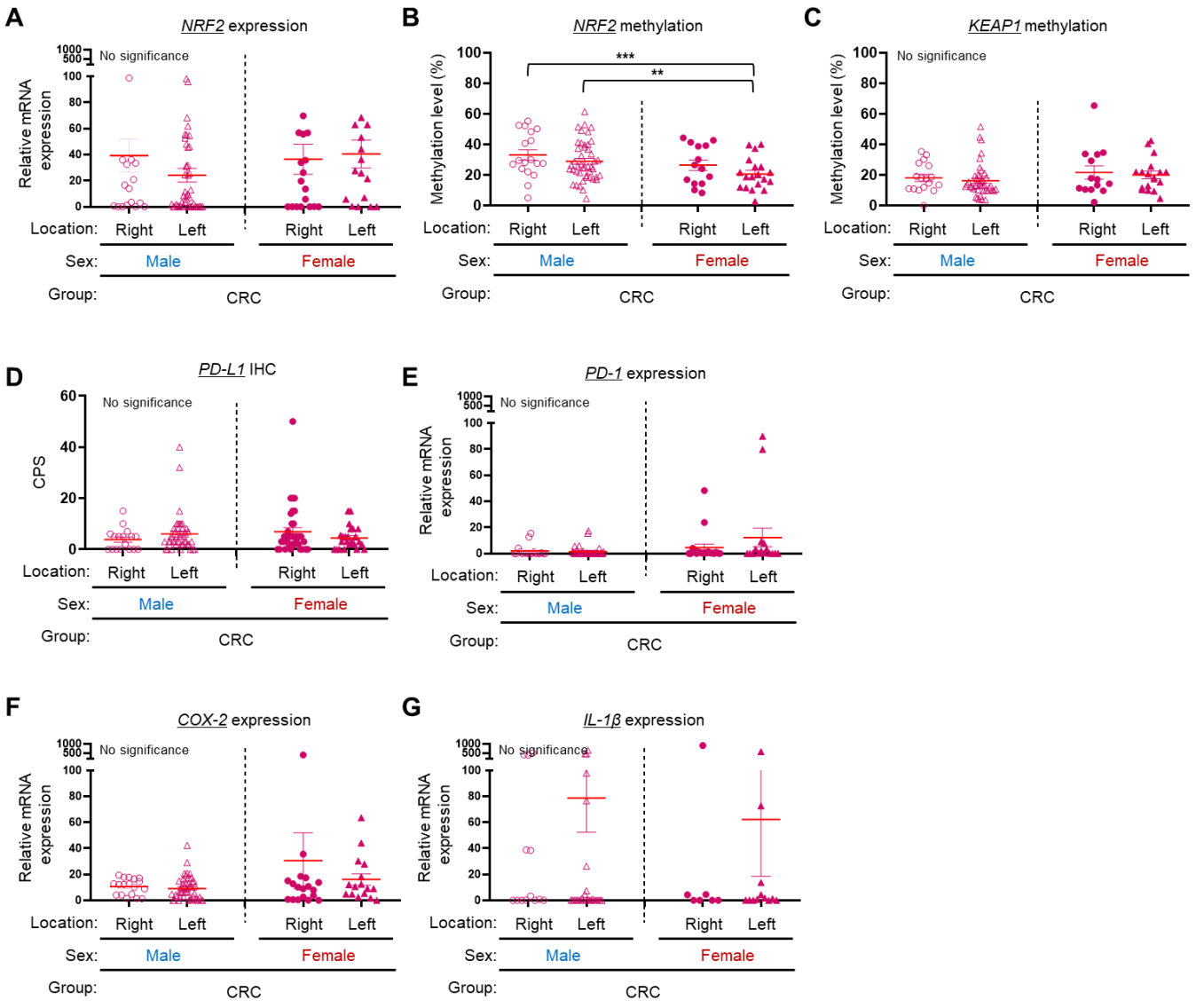
A
NRF2 expression
No significance
Relative mRNA expression
Location:
Right
Left
Right
Left
Sex:
Male
Female
Group:
CRC
B
NRF2 methylation
***
**
Methylation level (%)
C
KEAP1 methylation
D
PD-L1 IHC
CPS
E
PD-1 expression
F
COX-2 expression
G
IL-1β expression

S5 Fig. Comparison of expression of molecular markers according to colorectal cancer (CRC) occurrence location and sex. (A) Expression of the nuclear factor erythroid 2–related factor 2 (*NRF2*) mRNA based on the location of CRC in male and female groups, with cancer occurring on the right- or left-side. Glyceraldehyde 3-phosphate dehydrogenase (*GAPDH*) was used as an internal control. (B, C) NRF2 methylation levels were strongly lower in female left CRC group compared to male right and left CRC group. Methylation levels of *NRF2* (B) and kelch-like ECH-associated protein 1 (*KEAP1*) (C) based on the location of CRC in male and female groups, with cancer occurring on the right- or left-side. Actin-beta (*ACTB*) was used as an internal control. (D, E) Immunohistochemical analysis (D) and mRNA expression (E) of programmed death ligand 1 (PD-L1) based on the location of CRC in male and female groups, with cancer occurring on the right- or left-side. (F, G) The mRNA expression of cyclooxygenase 2 (*COX-2*) (F) and interleukin-1β (*IL-1β*) (G) based on the location of CRC in male and female groups, with cancer occurring on the right- or left-side. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$ for comparison between two groups (Mann-Whitney test). CPS, combined positive score.