MINDACT: Long-term results of the large prospective trial testing the 70-gene signature MammaPrint as guidance for adjuvant chemotherapy in breast cancer patients

EORTC-10041/BIG3-04 (EudraCT Number 2005-002625-31)

MINDACT TRIAL DESIGN

**Clinical-Pathological (C) risk**
(Adjuvant! Online)

**Genomic (G) risk**
(70-gene signature)

**N = 6693**

**Registration & Screening**

**Surgery**

**Discordant cases**
C-low/G-high or C-high/G-low

**1st randomization to treatment**
use Clinical vs. Genomic risk

**No Chemotherapy**

**2nd randomization**
Anthracycline-based vs. Capecitabine-Docetaxel

**Endocrine therapy**

**3rd randomization**
Tamoxifen 2y / Letrozole 5y vs. Letrozole 7y

**C-low/G-low**

**C-high/G-high**

**MINDACT population:**
HR+/HER2- 81%
HER2+ 9.5%
TNBC 9.6%

**Chemotherapy**
SECONDARY ENDPOINT
DMFS C-High/G-Low risk (ITT population) CT vs no CT

Absolute difference in DMFS between CT and no CT groups:
• at 5 years: 0.9 ± 1.1 % points
• at 8 years: 2.6 ± 1.6 % points

Type of first event (n = 150)
• distant recurrences: 74.7%
• death of any cause: 25.3%
DMFS in C-High / G-Low risk patients with luminal cancers (HR+/HER2-) stratified by age ITT population

Age ≤50 years

Age >50 years

5% difference

NO difference
Conclusions

• At 8.7 years medium FU, the primary endpoint continues to be met in CT untreated C-High/G-Low risk women, confirming MINDACT as a positive de-escalation study

• At 8 years, the estimated DMFS gain for CT administration in C-High/G-Low is 2.6% and must be balanced with CT harmful side effects

• Omitting CT in C-High/G-Low postmenopausal women continues to be safe (DMFS gain 0.2% ± 2.3%), and a fully preserved performance of MammaPrint to forego adjuvant CT is demonstrated.

• In premenopausal women the difference seen might be clinically relevant (DMFS gain 5% ± 2.8%); importantly, this effect may possibly be related to chemotherapy-induced ovarian function suppression.

• Overall in the C-Low/G-High risk patients, there is no advantage of guiding treatment based on the genomic risk

• Results remain valid for both LN-negative and LN(1-3)positive patients