



SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Bologna



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

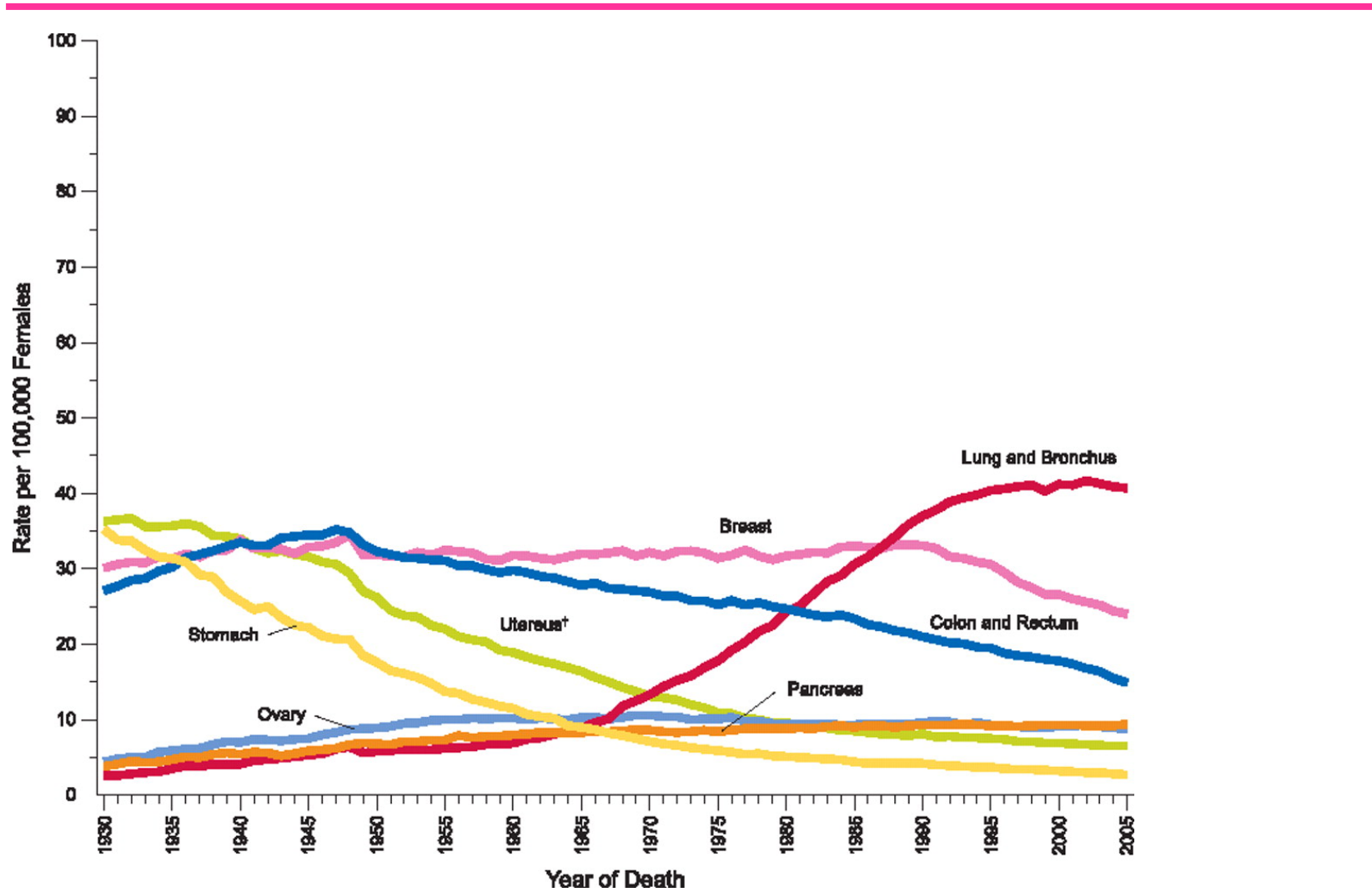


Caratterizzazione biologica per un corretto
trattamento personalizzato: l'esperienza dell'Emilia-
Romagna sul controllo di qualità

Cosa chiede (e perché lo chiede) l'oncologo
medico al patologo?

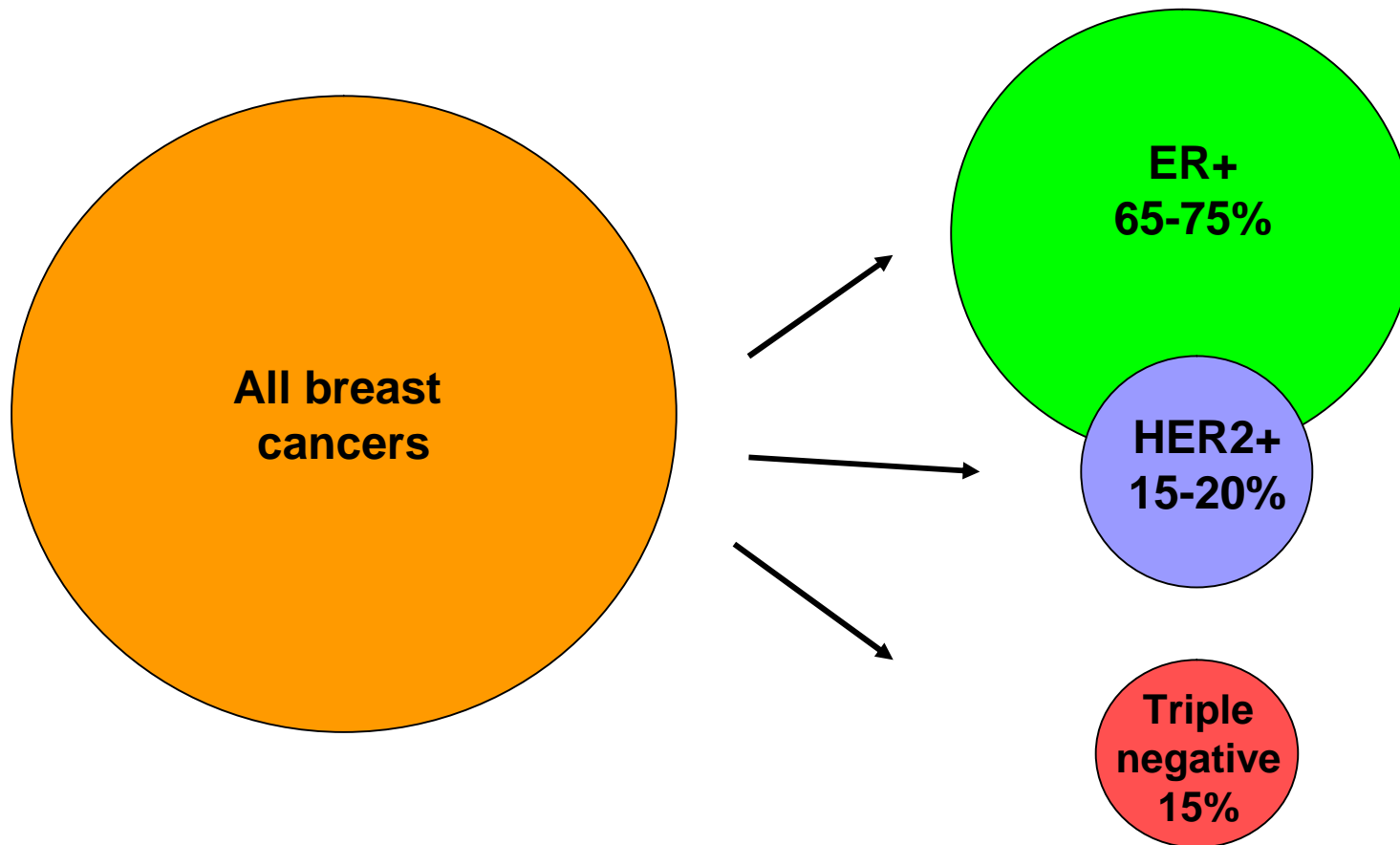
Claudio Zamagni
Oncologia Medica "Addarii"
S.Orsola-Malpighi Bologna

Annual Age-adjusted Cancer Death Rates* among Females for Selected Cancers, United States, 1930-2005



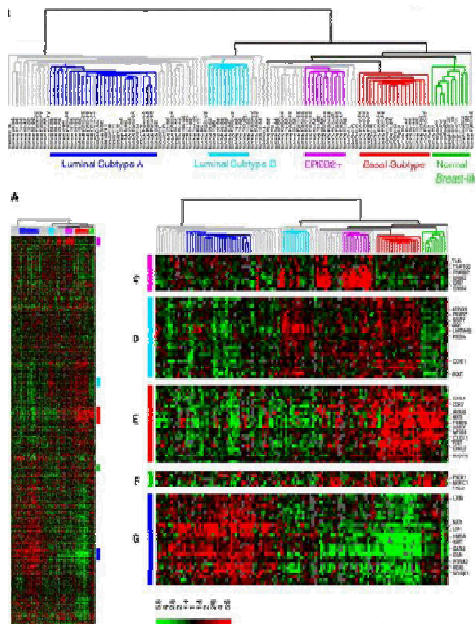
Jemal A et al. CA Cancer J Clin, 2009

Breast cancer subtypes by HIC

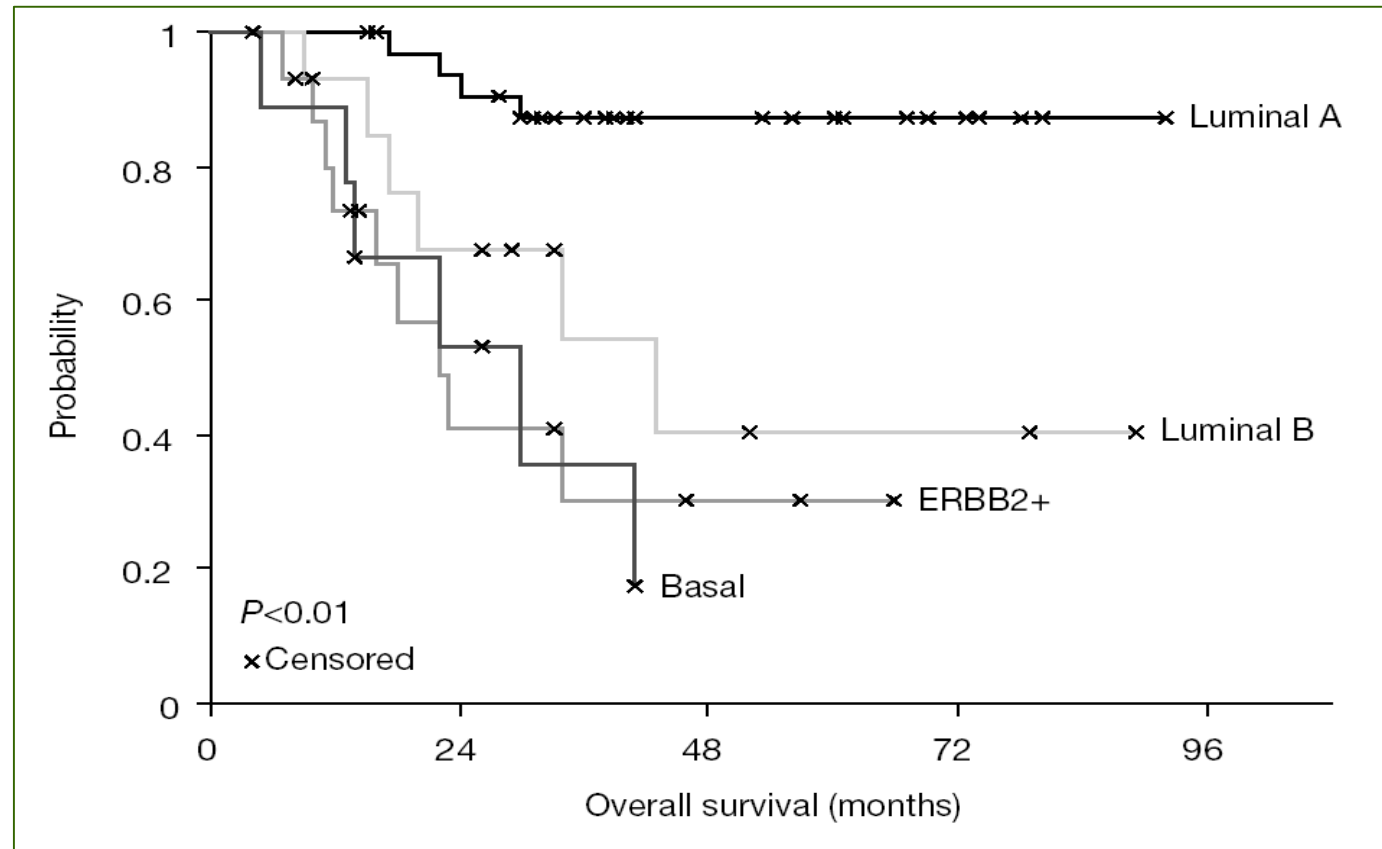


Breast Cancer Classification

"Breast Tumor Intrinsic" Subtype Classification

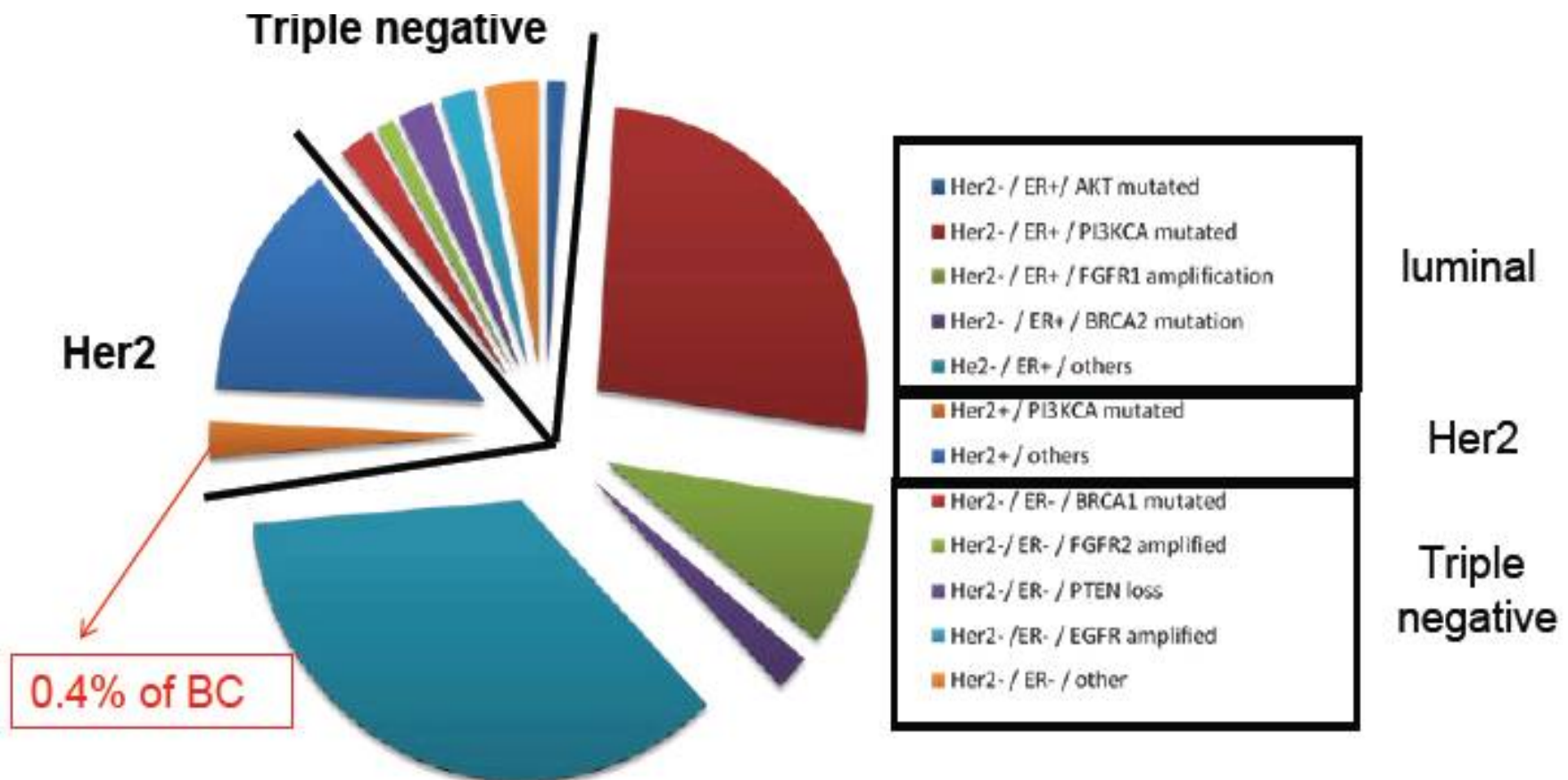


1. Luminal A
2. Luminal B
3. Normal breast-like
4. HER2
5. Basal-like



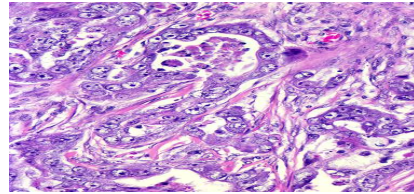
Sorlie T et al. Proc Natl Acad Sci USA 2001
 Sorlie T, et al. Proc Natl Acad Sci USA 2003
 Sotiriou C et al. Proc Natl Acad Sci USA 2003
 Hu Z et al. BMC Genom 2006

Molecular epidemiology of metastatic breast cancer: disease segmentation

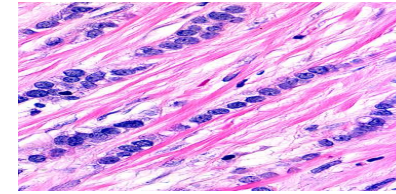


Breast Cancer Classification

Traditional
morphology-based
system

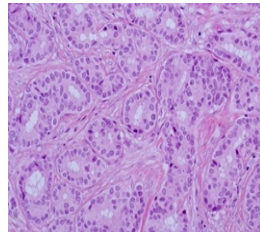


Ductal invasive carcinoma

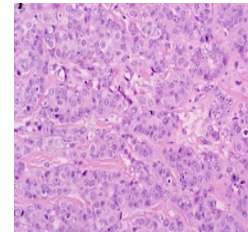


Lobular invasive carcinoma

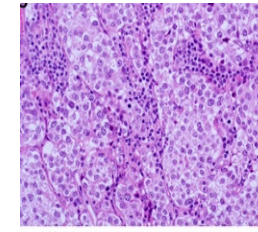
Grading System
"Elston-Ellis"



Grade 1

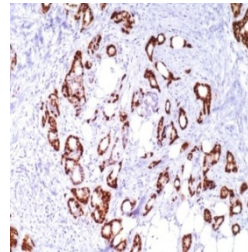


Grade 2

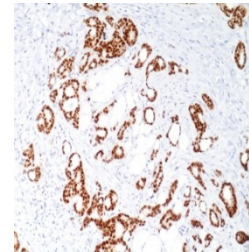


Grade 3

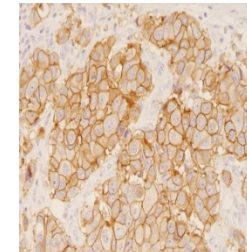
Pathways
activation-based
system



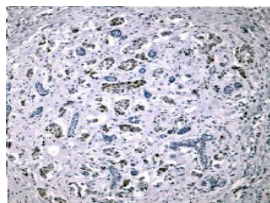
ER



PgR



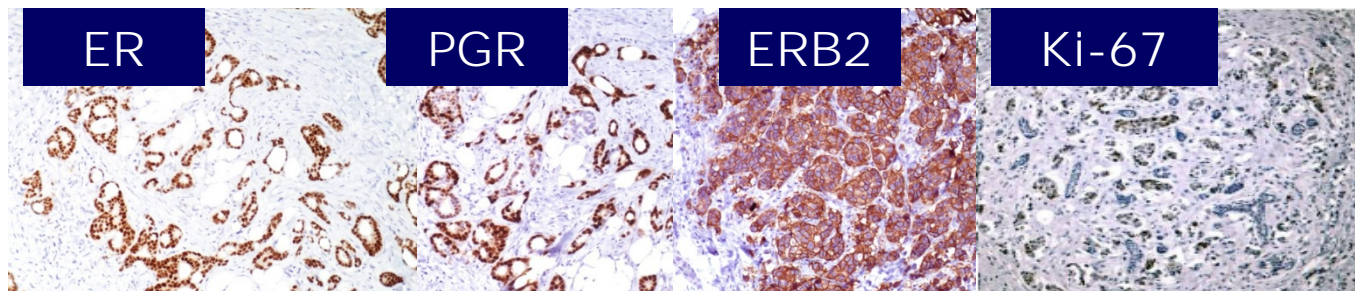
HER2



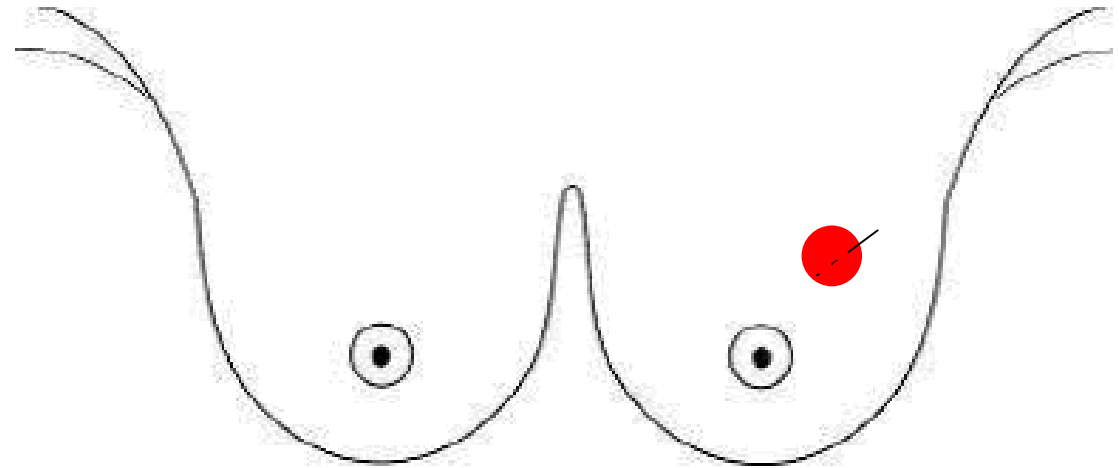
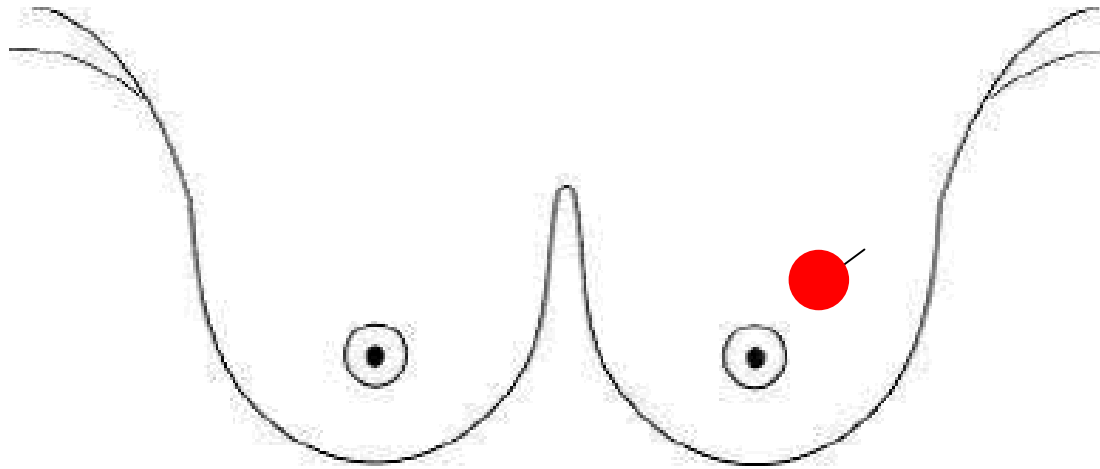
Ki67

Breast Cancer Classification

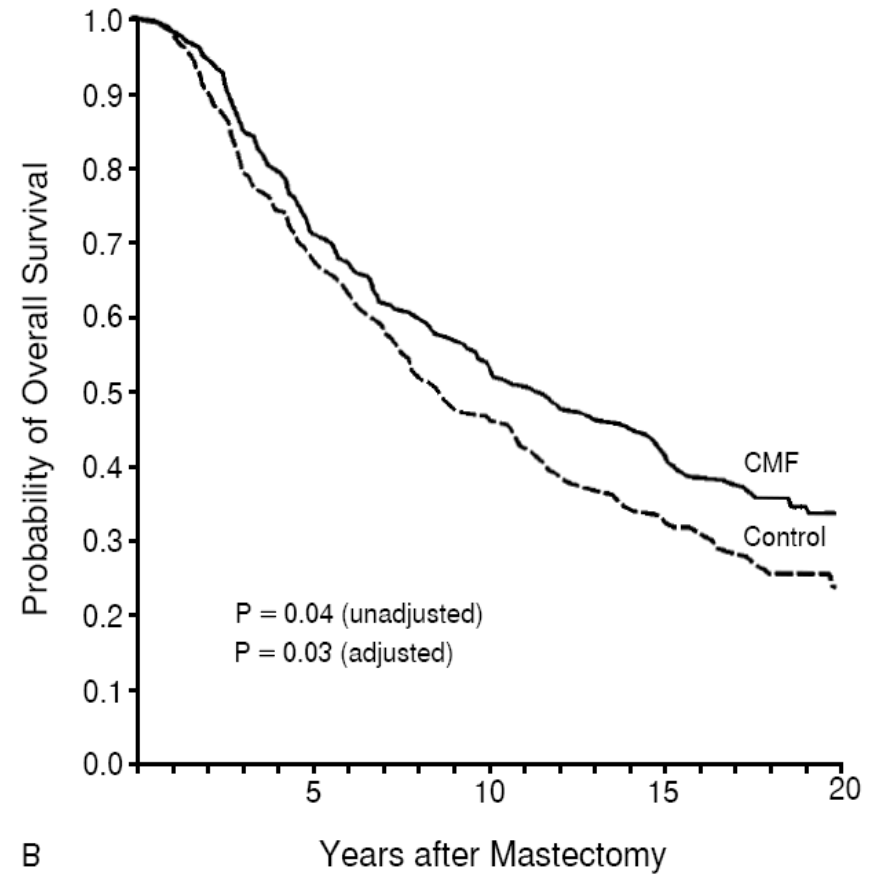
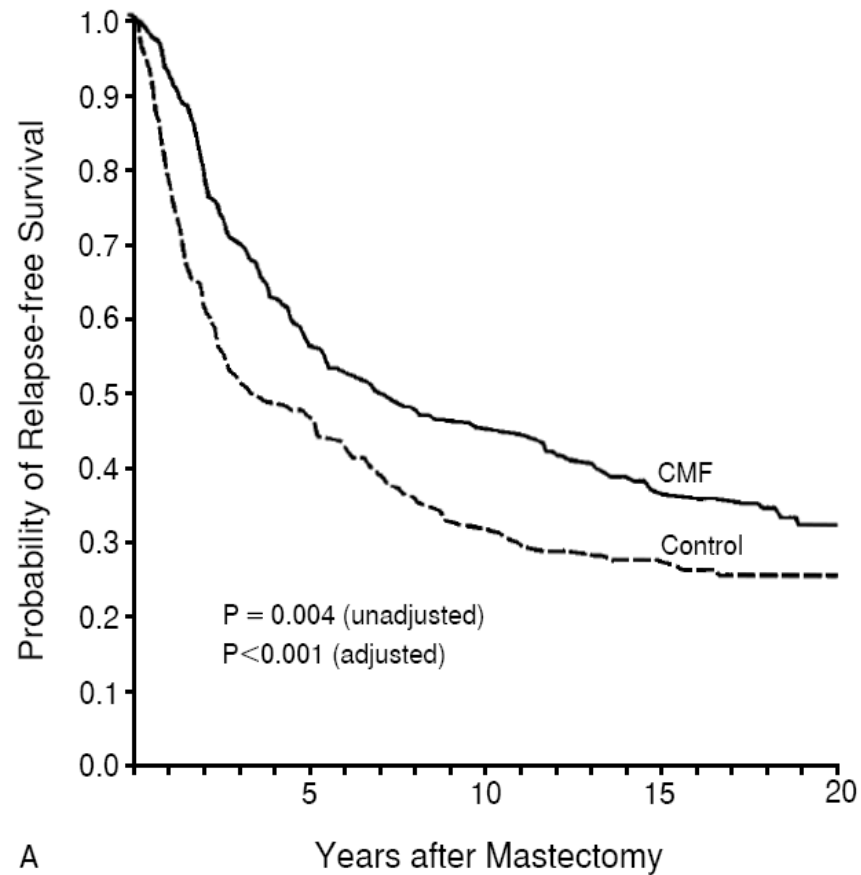
Molecular subtype	ER/PgR/ERB2	Ki67	Histologic Grade	Adjuvant therapy
Luminal A	ER+; PgR+ ERB2 -	Low	G1 (G2)	OT
Luminal B HER2 -	ER+/- PgR+/- ERB2 -	Intermediate /high	G2/G3	OT +/- CHT
Erb2 Luminal	ER+/- PgR+/- ERB2+	+/-	G2/G3	CHT + antiHER2 + OT
Erb2+ /ER-	ER- PgR- ERB2 +	+/-	G3	CHT + antiHER2
Basal-like	ER- PgR- ERB2 -	High	G3	CHT



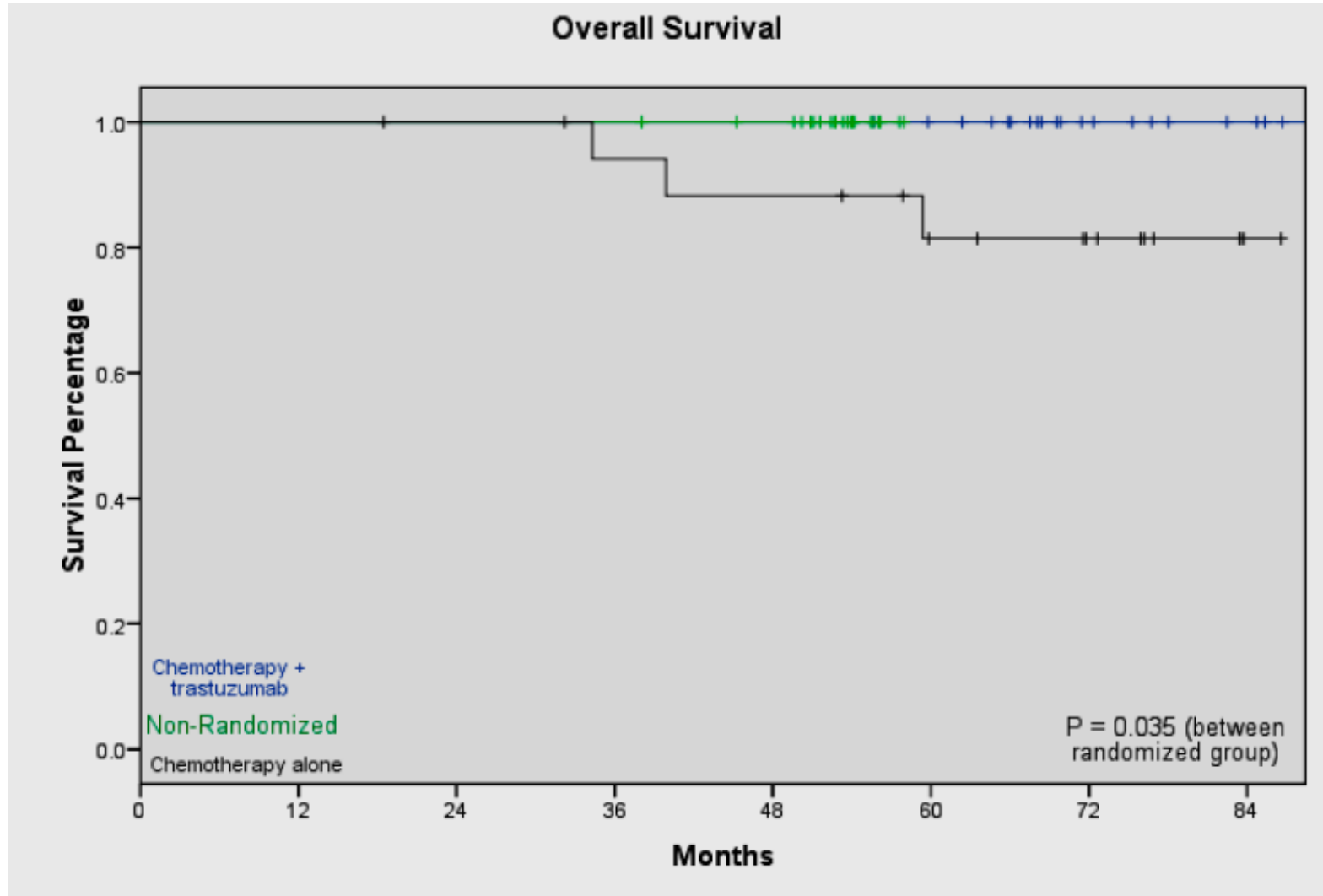
Why a systemic treatment after the “complete” excision of breast cancer?



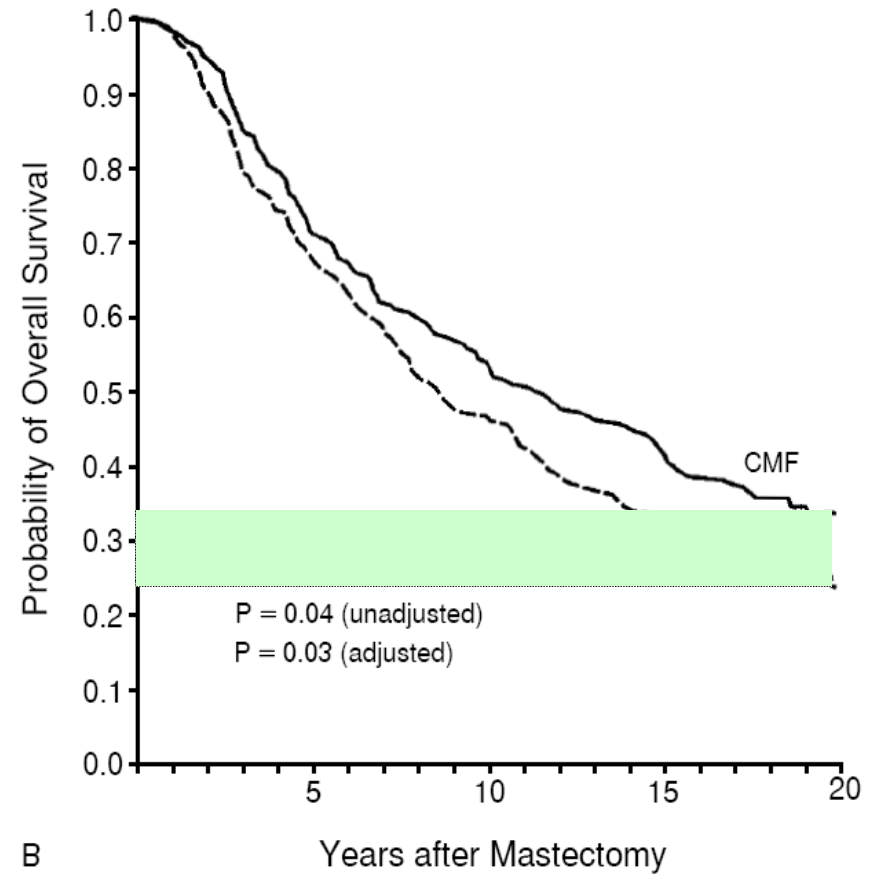
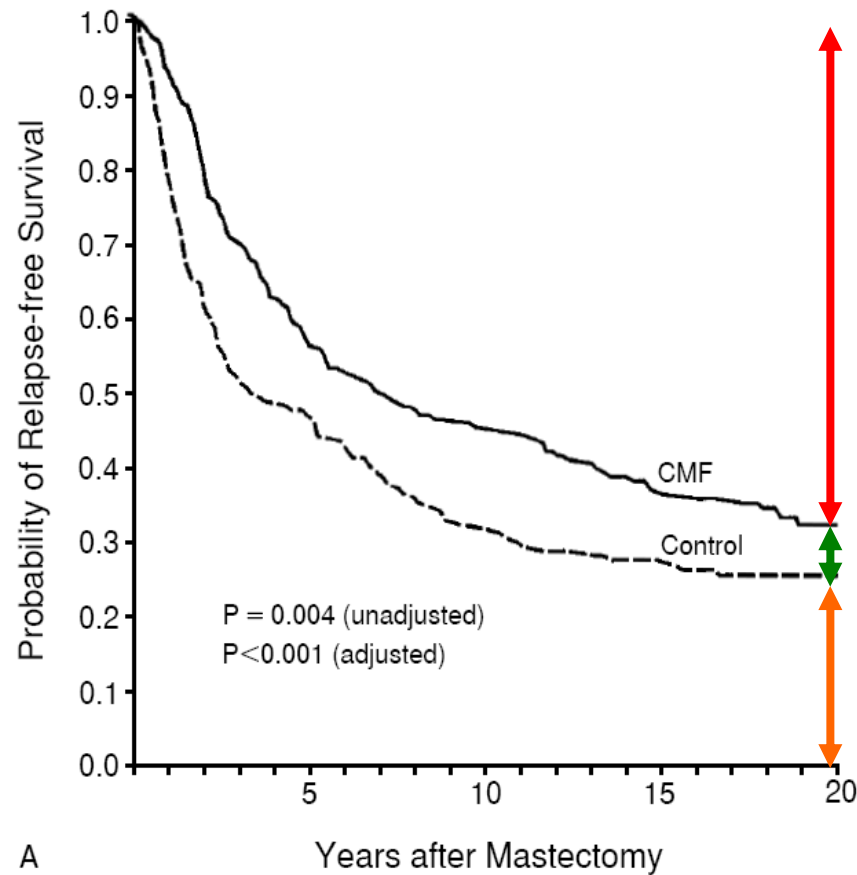
Terapia adiuvante: terapia delle micrometastasi (che possono esserci oppure no)



MD Anderson Neoadjuvant Trial - OS at 72 months FU



Terapia adiuvante: terapia delle micrometastasi (che possono esserci oppure no)



Modificato da Bonadonna G et al N Engl J Med, 1995

Cosa chiede l'oncologo medico al patologo?

Accuratezza della diagnosi bio-patologica

perché si traduce in appropriatezza della
prescrizione terapeutica

- Falsi positivi: effetti collaterali, anche severi, inutili • terapia dannosa
- Falsi negativi: perdita di opportunità terapeutica • aumento decessi per patologia