



Breast cancer in elderly

IBDC Feb 6, 2013

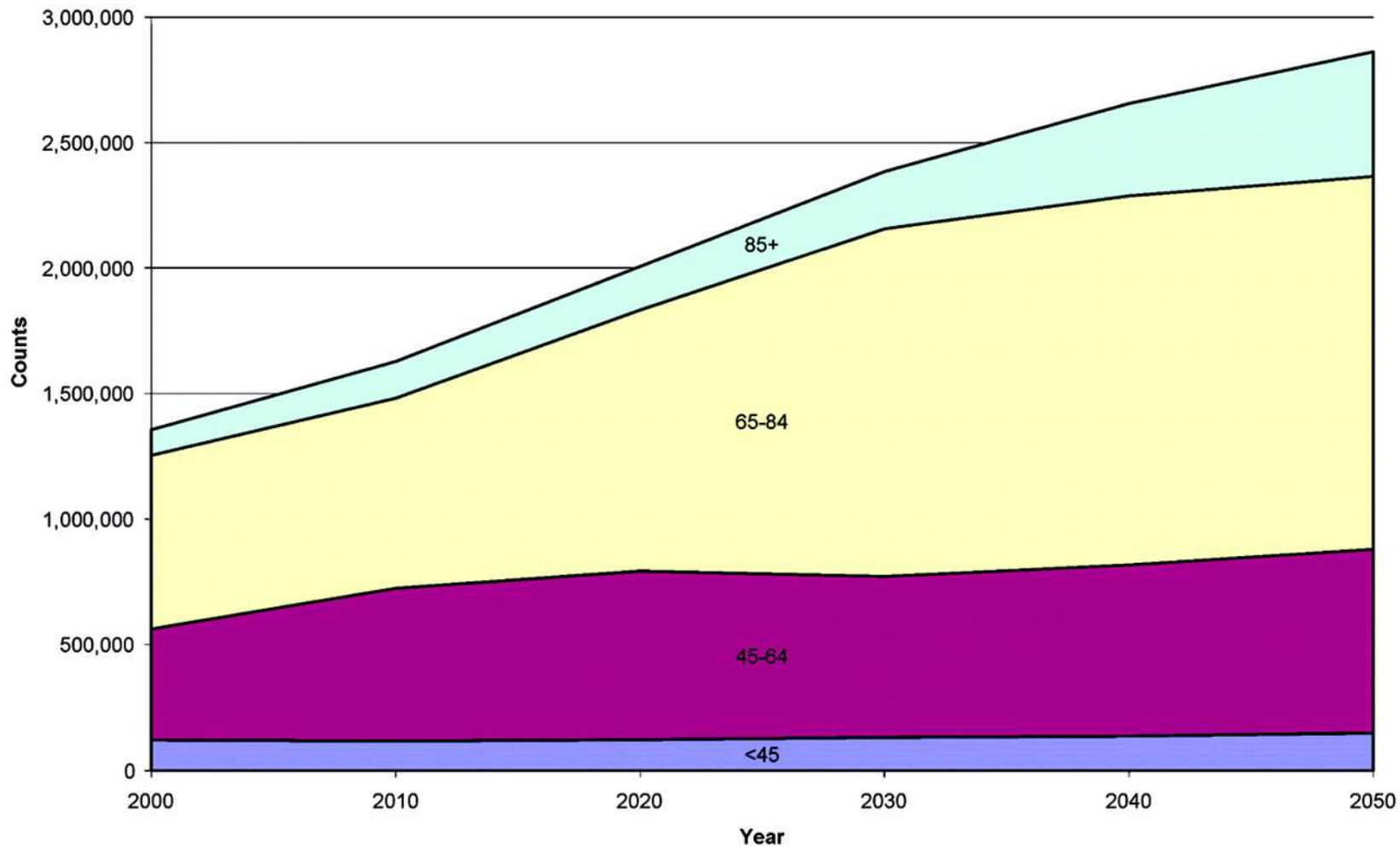
Etienne Brain, MD, PhD
Medical Oncology



HÔPITAL RENÉ HUGUENIN

Au 1^{er} janvier 2010, le Centre René Huguenin devient l'Hôpital René Huguenin, un établissement de soins, d'enseignement et de recherche de l'Institut Curie

Projected number of cancer cases for 2000–2050 by age group (<45, 45–64, 65–84, 85+) based on projected census population estimates and delay-adjusted SEER-17 cancer incidence rates.



Hayat M J et al. The Oncologist 2007;12:20-37

Incidence du cancer de 2010 à 2030 (Smith JCO 2009)

- +11% < 65A
- +67% > 65A

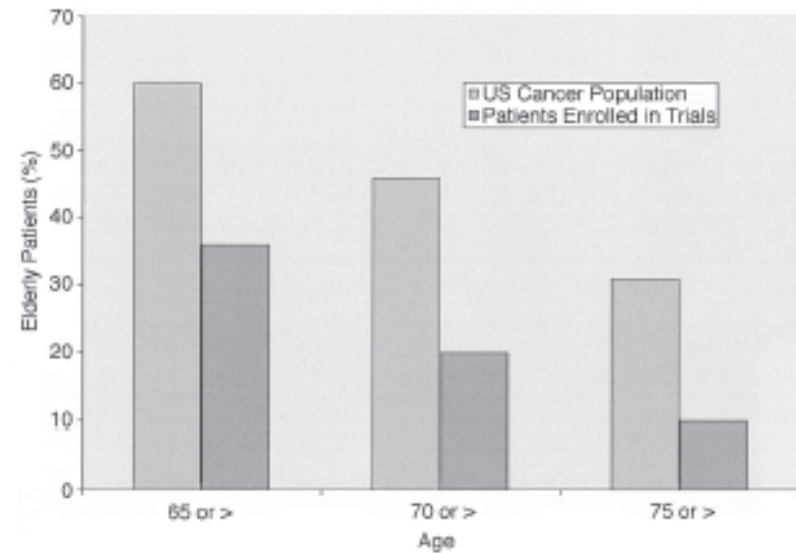
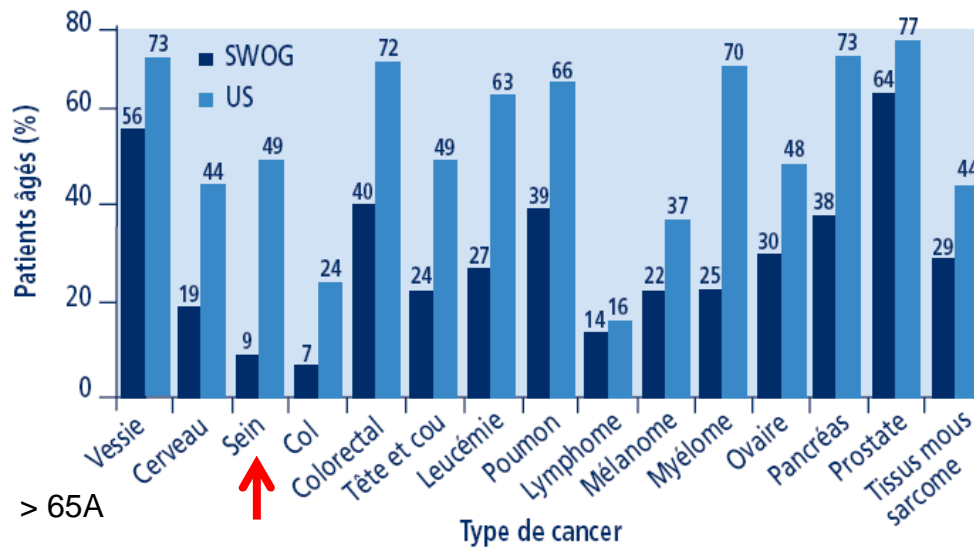
Litterature

- **SWOG**

- 164 studies (1993-1996)
- 16,000 patients

- **FDA**

35% of all cancers > 75yo = 10% of inclusions



Hutchins. NEJM 1999; Talarico. JCO 2004

Dilemma

1. **Nihilism**: elderly CANNOT receive treatment
 2. **Moderation**: elderly CAN derive benefits from treatment
 3. **Blind enthusiasm**: elderly receive a FUTILE treatment
- → → Collaboration between **geriatrician and oncologist**

A frailty revealed

- Mme BON... IR... 86 yo
 - No previous history, husband with Parkinson
- Breast conservative surgery LNAD
 - Invasive BC 21 mm
 - 8 pN0, SBR III, Ki 67 54%, HER2+++ , ER-, PgR-
 - Selection for GERICO 06 (4 MC)
- Cotation
 - Medical oncology
 - PS 0
 - “Go for it“
 - Geriatric eye
 - Autonomy, cognition OK
 - Nutrition OK, GDS +
 - 3 falls during the yr
 - Vascular problems?
- Exclusion GERICO-06 but
 - Heart function evaluation
 - Standard CT planification
- Reevaluation by geriatrician
- CVA catheter
 - Stroke
 - CT suspended
- XRT only
- Sequellar hemiparesia

Definition of “old” x ageing heterogeneity

Women life expectancy

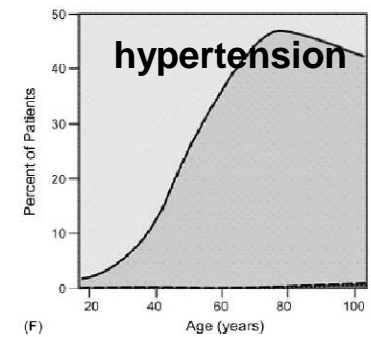
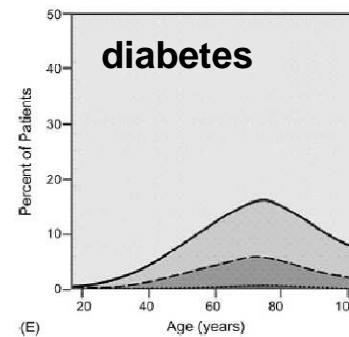
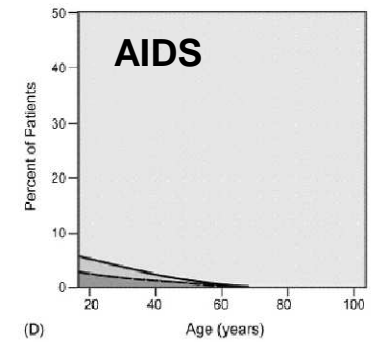
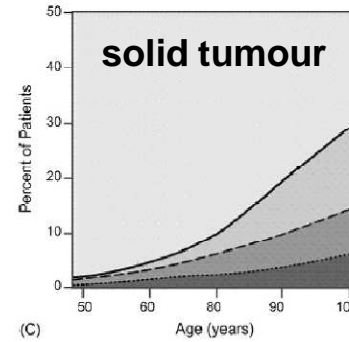
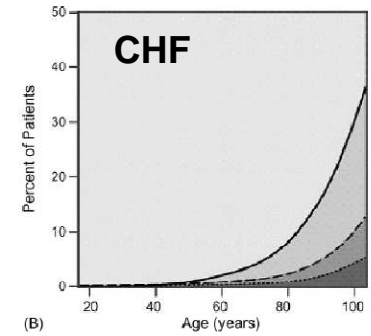
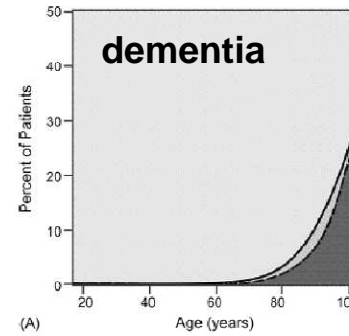
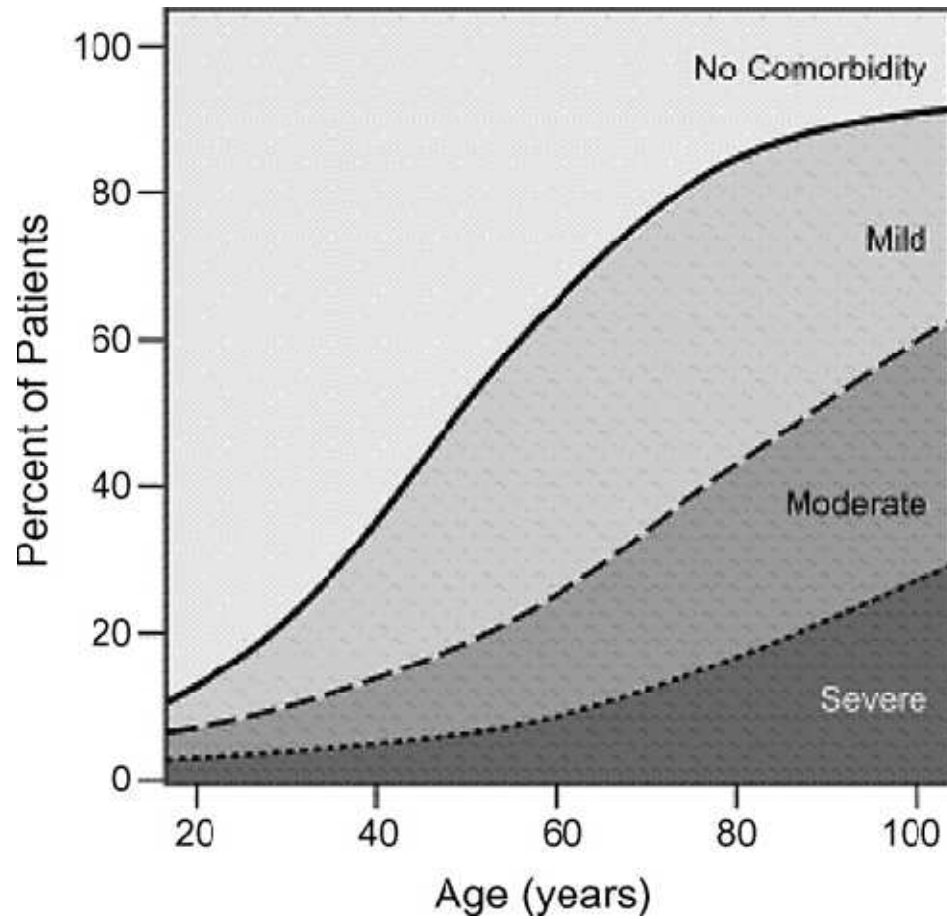
Age	Top 25 th % Fit	50 th % Intermediate	Lowest 25 th % Sick
50	40	33	24.5
70	21.3	15.7	9.5
75	17	11.9	6.8
80	13	8.6	4.6
85	9.6	5.9	2.9
90	6.8	3.9	1.8
95	4.8	2.7	1.1



emeA

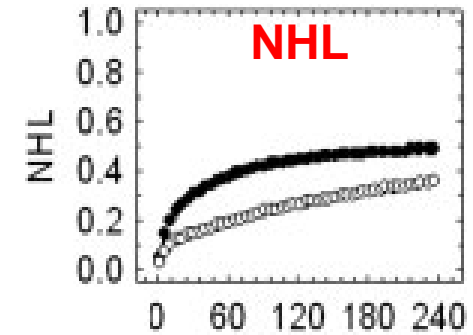
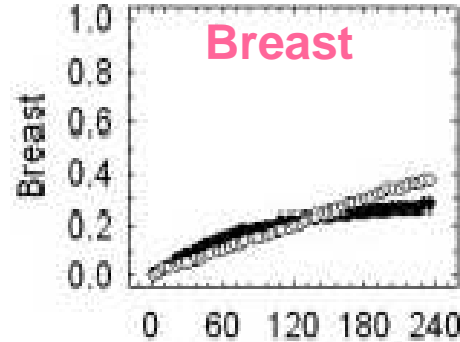
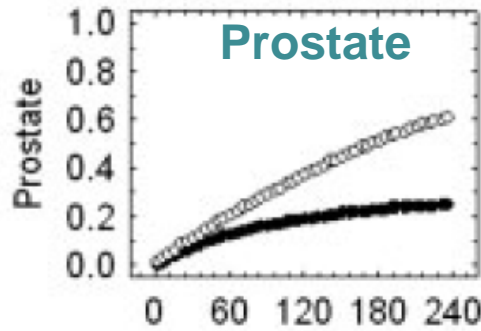


Comorbidity across age

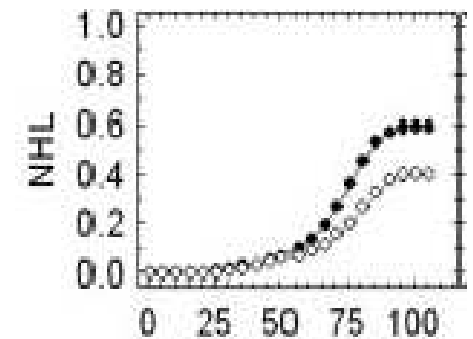
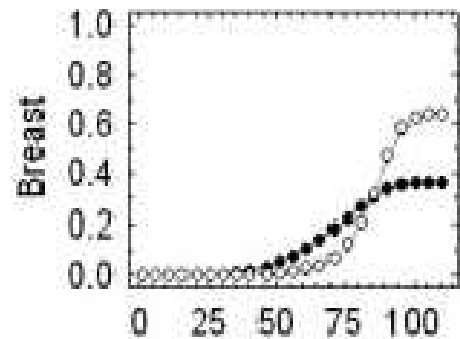
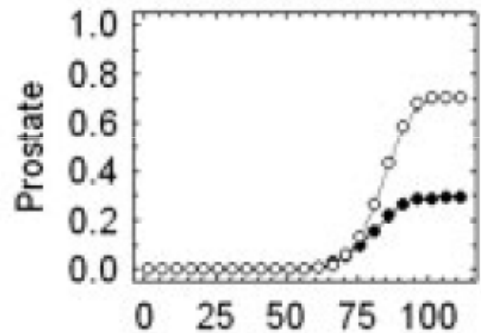


Competing causes of mortality

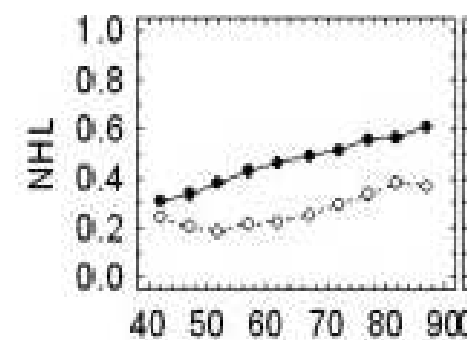
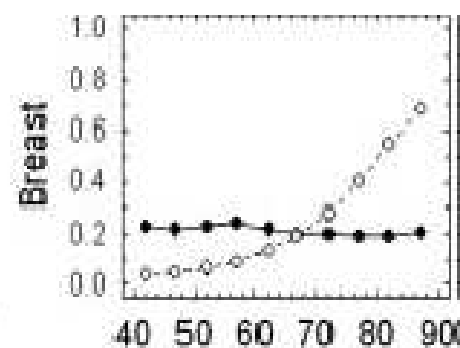
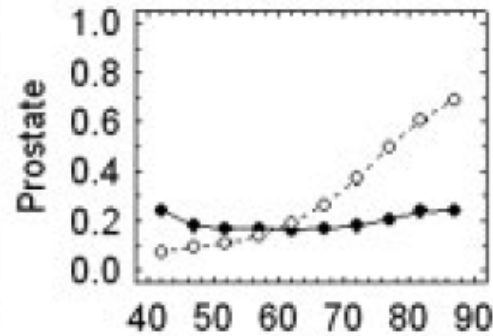
Cumulative probability of death



Cumulative probability of death vs attained age



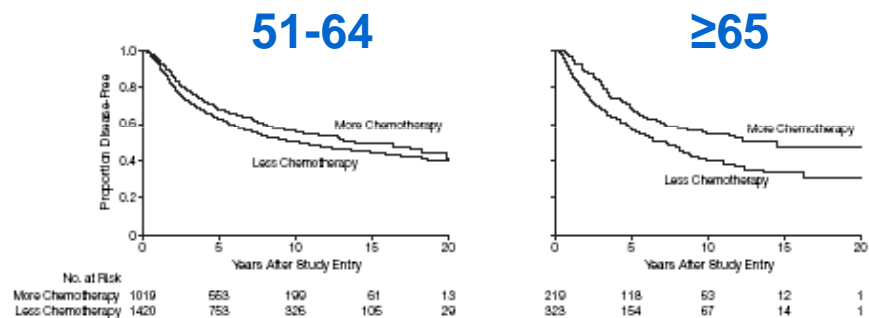
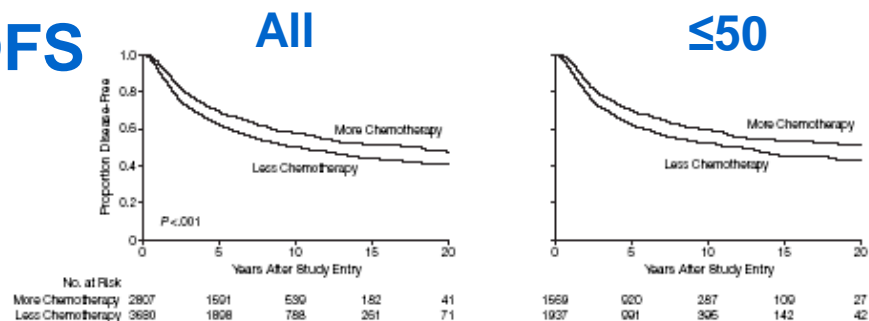
Competing HR of death



Deaths attributed to the primary cancer (solid dots) and those attributed to comorbidity (open circles)

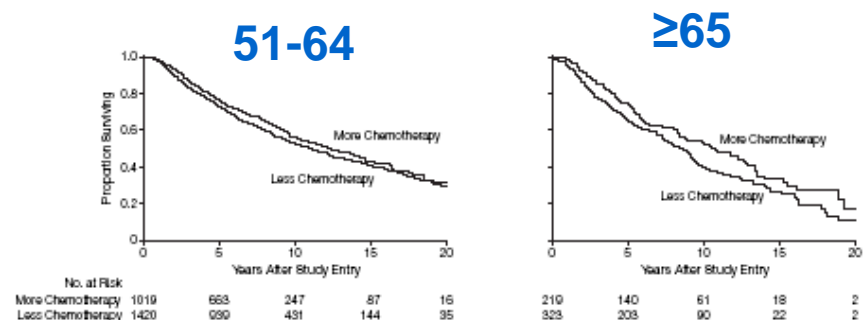
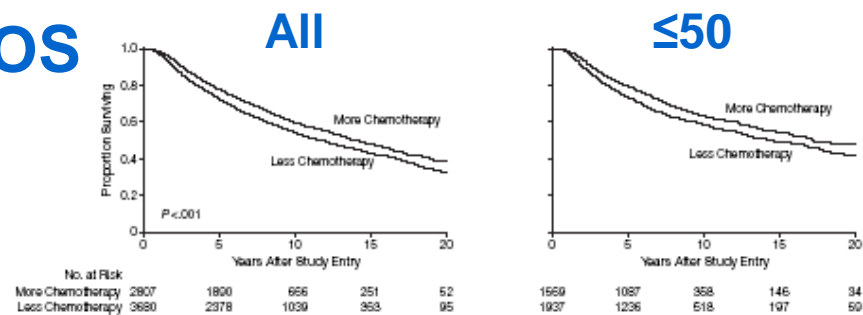
Adjuvant chemo for breast cancer

DFS



- CALGB (1975-1999)
- 4 randomized trials
- 6487 pts
 - > 65 yo 542 (8%)
 - > 70 yo 159 (2%)

OS



- Results
 - Benefit **identical**
 - Toxicity **careful!!**
 - **Toxic deaths 1.5%**

ATE and bevacizumab

ATE events	Chemo only N = 782	Chemo + beva N = 963
Global	1.7	3.8
No risk factor	1.0	1.8
< 65 yo	1.4	2.1
≥ 65 yo (N = 279)	2.5	7.1
Previous history of ATE	3.4	15.7
≥ 65 yo and previous history	2.2	17.9

Drug X < and > a certain age...

- **Oncology**

- Toxicity
- Response rate (RECIST)
- Survival
 - DFS
 - OS
- PK

- **Gerontology**

- Quality of survival or quantity of life of quality
 - Cognition
 - Independence
 - Functional status
 - QoL

EGA



Impact of CGA on treatment?

- **Study ELCAPA 01**

- 375 pts 70+ with CGA

- Age 79.6±5.6
- 53% F, 59% digestive tumours
- Nb of comorbidities 4.2±2.7, CIRSG 11.8±5.3

- Modification of initial therapeutic decision induced by EGA

- **21% (95%CI 16.8-25.3) with 81% decrease**

- Univariate analysis

- | | |
|------------------------|--------------------|
| – PS ≥ 2 | 73% vs 41% |
| – <u>ADL</u> | 59% vs 24% |
| – <u>Malnutrition</u> | 82% vs 51% |
| – Cognitive impairment | 39% vs 25% |
| – Depression | 53% vs 22% |
| – Comorbidities | 4.8±2.9 vs 4.0±2.6 |

- Multivariate analysis

ADL and malnutrition

Functional status

- **ADL (Katz)**

Activities of Daily Living

1. Soins corporels
2. Habillage
3. Toilette
4. Transfert
5. Continence
6. Alimentation

- **IADL (Lawton)**

Instrumental ADL

1. Utiliser le téléphone
2. Faire ses courses
3. Préparation des repas
4. Entretenir la maison
5. Blanchisserie
6. Utiliser les moyens de transport
7. Prendre ses médicaments
8. Gérer son budget

Dependance on ≥ 1 item	2-yr mortality	Cares/help
ADL	30%	Full time
IADL	15%	Partial

Bilan groupe GERICO



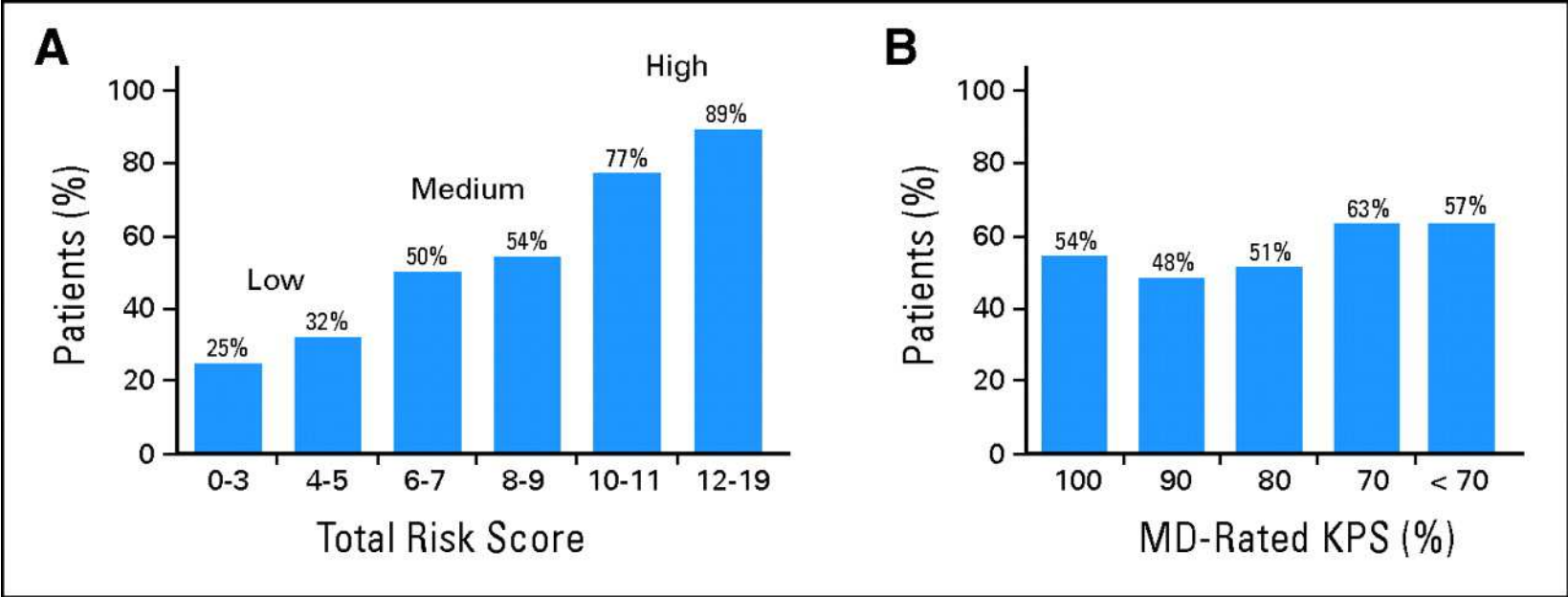
Centre
d'Investigation
Clinique en
Cancérologie



		Age	Phase	Critère principal de jugement	N
	Création (F Pein et AC Braud)				
2002	G-01 : CT orale (X+VNR) sein, poumon, prostate M+	70+	II	ADL	80
	G-02 : CT XELOX CCR M+	70+	II	ADL	60
2004	G-03 : RT interstitielle per opératoire sein < 3 cm N-	70+	II	Qualité	40
2005	G-04 : CT TxT biweekly sein M+	70+	II	IADL	27/58
	G-05 : CT TxT biweekly NSCLC M+	70+	II	IADL	5/58
2006	G-06 : CT adjuvante anthracyclines (MC) sein RH-	70+	II	ADL	40
2008	<i>G-07 : validation CRASH</i>	70+	Cohorte	Composite	NA
	<i>Étude sarcome Aegide + GSF</i>	70+	II R	Composite	NA
2009	G-09 : sein M+ HER2+++ X + lapatinib	70+	II	Composite	52
	Rétrospective L1 CT M+ sein (Bergonié)	75+	Cohorte	Descriptif	> 500
	DOGMES L1 CT DXR liposomale (ARCAGY)	70+	II	RR	60
2010	G-10/GETUG P-03 : CT TxT prostate + PK	75+	II R	Composite	72-128
	PRODIGE 20 (G-08) : CT ± bevacizumab CCR M+	75+	II R / III	Composite	116
2011	G-11/PACS 10 : CT adjuvante sein RH+, espérance de vie et score pronostique	70+	III	OS	700 (1200)

	CRASH (Tampa) Chemotherapy Risk Assessment Score for High-age patients	City of Hope
N pts/centres	585/6	500/7
Age	76 (70-92)	73 (65-91)
Variables	Age, sex, BMI, DBP Stage, chemo before, response, bone marrow CIRSG, polypharmacy, SRH, PS, IADL, GDS, MMS, MNA CBC, liver, CL _{creat} , LDH, albumin MAX2 = [haematological gr 4 + non-haematological gr 3-4]:2	Age, sex, race, education, marital status Tumour and treatment CGA Kidney, CBC, Hb, liver
Population	111 regimen of chemo	61% education, 56% women, 61% stage IV (lung 144, GI 13, gynecological 86, breast 56) 43% IADL, 18% falls, 44% > 2 comorbidities, 6% cognitive disorders
Toxicity	32% grade 4 haematological 56% grade 3-4 non-haematological	53% grade 3-5 - 26% haematological (FN 11%, CBC 10%) - 43% non-haematological (asthenia 16%, dehydration 9%) - 2% deaths
Predictors	<u>Haematological</u> : albumin, IADL, LDH, DBP, MAX2 <u>Non-haematological</u> : Hb, CL _{creat} , albumin, SRH, CIRSG, PS, MMS, MNA, MAX2	73+, GI/GU, standard dose, polychemo, fall 6 months, IADL, social activity Hb < 11, CL_{creat}, hear loss, walk > 1 block

Ability of (A) risk score versus (B) physician-rated Karnofsky performance status (KPS) to predict chemotherapy toxicity.



Hurria A et al. JCO 2011;29:3457-3465

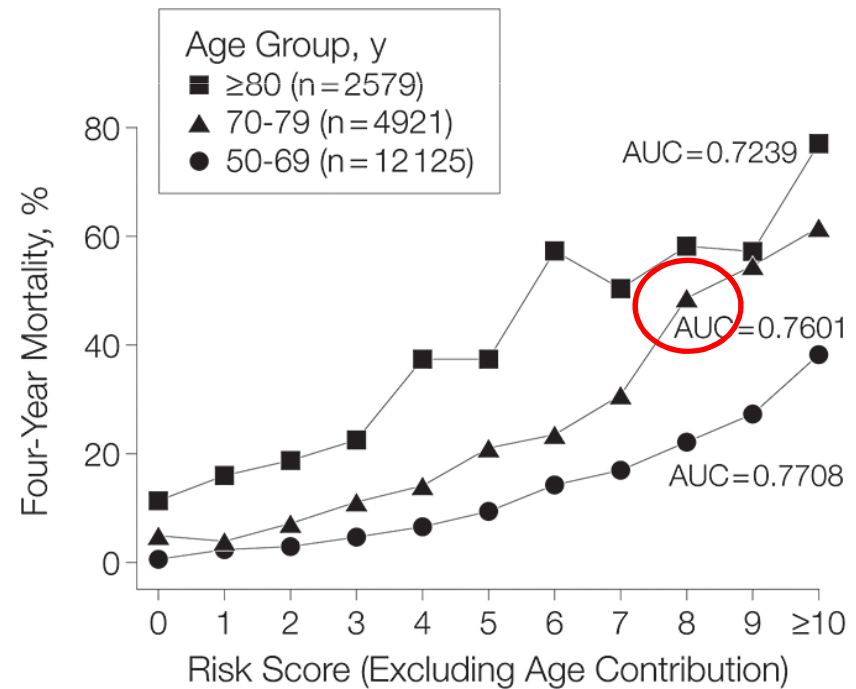
4-year mortality score in general elderly population

Box. Four-Year Mortality Index for Older Adults

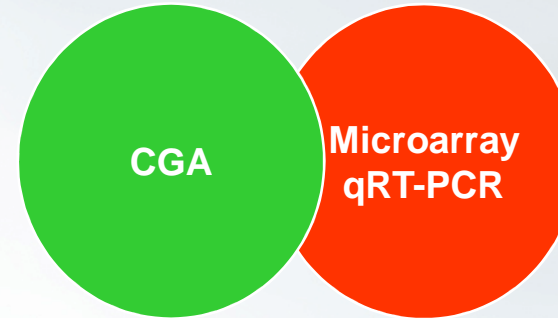
1. Age _____	60-64: 1 point 65-69: 2 points 70-74: 3 points 75-79: 4 points 80-84: 5 points ≥85: 7 points
2. Sex (Male/Female)	Male: 2 points
3. a. Weight: _____	BMI <25: 1 point
b. Height: _____	
703 × (weight in pounds/ height in inches ²) BMI = _____	
4. Has a doctor ever told you that you have diabetes or high blood sugar? (Y/N)	Diabetes: 1 point
5. Has a doctor told you that you have cancer or a malignant tumor, excluding minor skin cancers? (Y/N)	Cancer: 2 points
6. Do you have a chronic lung disease that limits your usual activities or makes you need oxygen at home? (Y/N)	Lung Disease: 2 points
7. Has a doctor told you that you have congestive heart failure? (Y/N)	Heart Failure: 2 points
8. Have you smoked cigarettes in the past week? (Y/N)	Smoke: 2 points
9. Because of a health or memory problem do you have any difficulty with bathing or showering? (Y/N)	Bathing: 2 points
10. Because of a health or memory problem, do you have any difficulty with managing your money—such as paying your bills and keeping track of expenses? (Y/N)	Finances: 2 points
11. Because of a health problem do you have any difficulty with walking several blocks? (Y/N)	Walking: 2 points
12. Because of a health problem do you have any difficulty with pulling or pushing large objects like a living room chair? (Y/N)	Push or Pull: 1 point
Total Points: _____	

Health retirement study

- > 50 yo (40% > 70 yo)
 - Construction 11,701 subjects
 - Validation 8,009 subjects



Score ≥ 8 = 25% of 70+
Score ≥ 8 = 50% of 75+



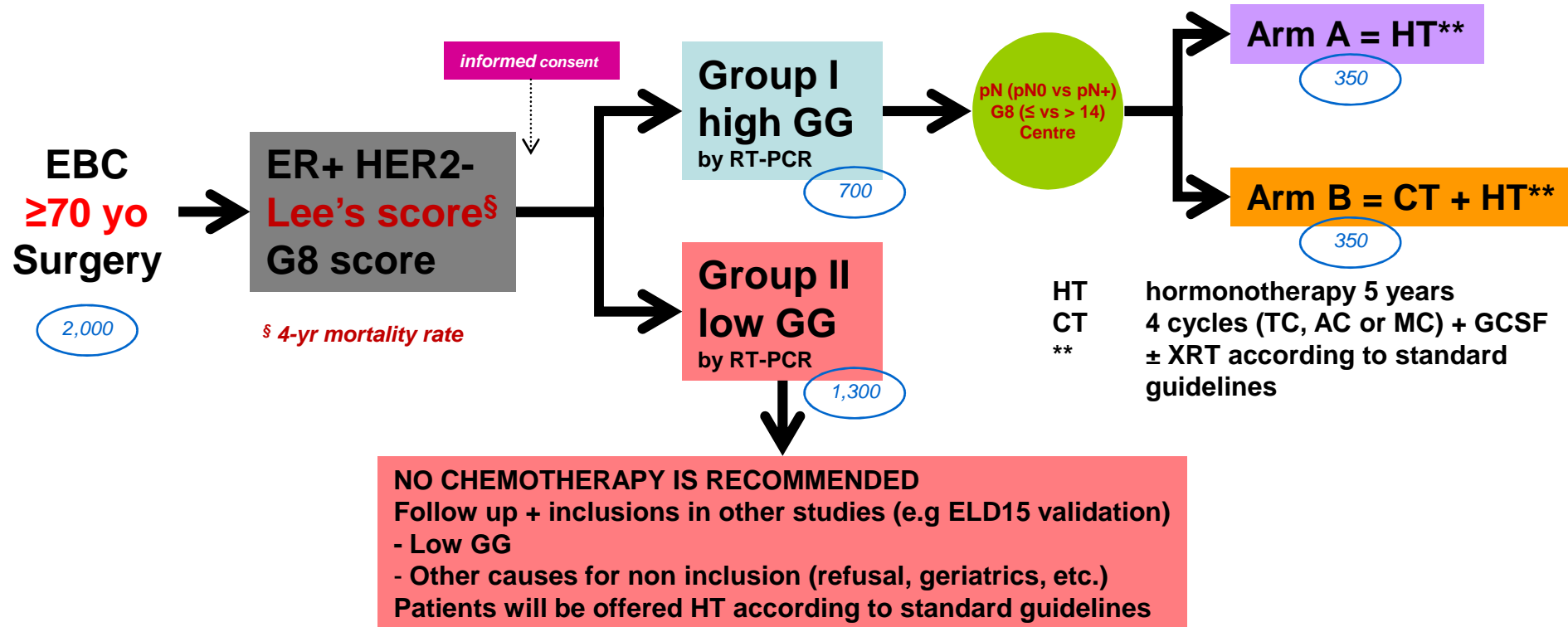
Protocol **ASTER 70s** GERICO 11 / PACS10

Adjuvant **s**ystemic **t**reatment for oestrogen-receptor (**ER**)-positive HER2-negative breast carcinoma in women over **70** according to Genomic Grade (GG): chemotherapy + endocrine treatment versus endocrine treatment. A French UNICANCER Geriatric Oncology Group (GERICO) and Breast Group (UCBG) multicentre phase III trial

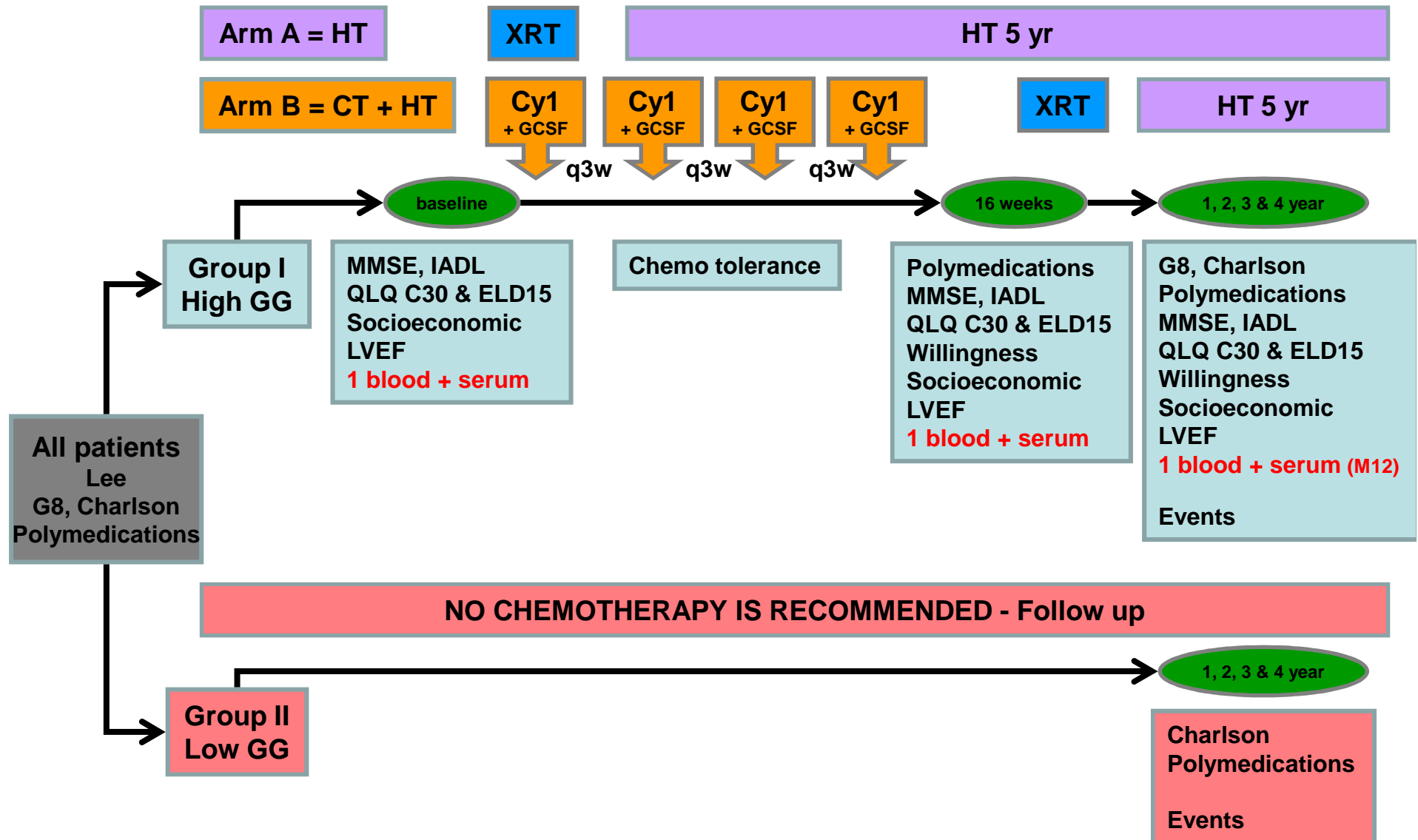
EUDRACT N°2011-004744-22, PHRC national 2011, NCT01 564056



ASTER 70s - Design



GERICO 11 (EUDRACT N° 2011-004744-22, PHRC national 2011, NCT0 1564056)



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SAVE THE DATE – 24 to 26 October 2013