

# Late morbidity after breast cancer in the young patient.

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# Late effects in young patients

- Late effects, independent of age.
- Late effects seen in all age groups, but with higher impact among young women.
- Late effects seen only in the young women.

# Treatment of young patients

- Around ¼ of all breast cancer patients are below 50, and around 2% below 35 years.
- Being young is an independent risk factor, when deciding on adjuvant treatment.

D: MEDICINSK BEHANDLING.							
DBCg gruppe	HER2 status	ER status (%pos)	Alder	Menopause	Risiko-fakt.*	Behandl.**	Beh.'s-program
I	Positiv	0 %				Ingen	<input type="checkbox"/> 2010 – a
		≥1%				KT+ Tras	<input type="checkbox"/> 2010 – d,t
	Negativ	0 %				KT	<input type="checkbox"/> 2010 – d
		1-9%				KT + ET	<input type="checkbox"/> 2010 – b
II		≥10 %	<40 år			KT + ET	<input type="checkbox"/> 2010 – b
			40-49 år		Nej	ET	<input type="checkbox"/> 2010 – c
			≥ 50	Præmeno.	Ja	KT + ET	<input type="checkbox"/> 2010 – b
					Nej	ET	<input type="checkbox"/> 2010 – c
				Postmeno.	Ja	KT + ET	<input type="checkbox"/> 2010 – b
					Nej	ET	<input type="checkbox"/> 2010 – c
Ja	KT + ET	<input type="checkbox"/> 2010 – b					

\*RISIKOFAKTORER: For pt. ≥40 år med HER2 neg. og ER≥10% tilbydes KT når der er mindst én risikofaktor, er angivet med "Ja" nedenfor.

Alder 40-49 år	Ja: Størrelse > 10mm eller node positiv eller duktal grad 2-3 eller lobulær grad 3
Præmenopausal og alder ≥ 50 år	Ja: Størrelse > 20mm eller node positiv eller duktal grad 2-3 eller lobulær grad 3
Postmenopausal og alder ≥ 50 år	Ja: DBCg score Q2-Q4 eller N4+ (≥4 positive lymfeknuder)

\*\*BEHANDLING: Hos gruppe II patienter gives bisfosfonat, hvis postmenopausale eller hvis præmenopausale beh. med ovariel suppression.

# Young vs elderly

- The young breast cancer patients
  - Are more often planning to have children
  - Do more often have small children at home
  - Are more often developing their careers professionally

# Late effects, independent of age

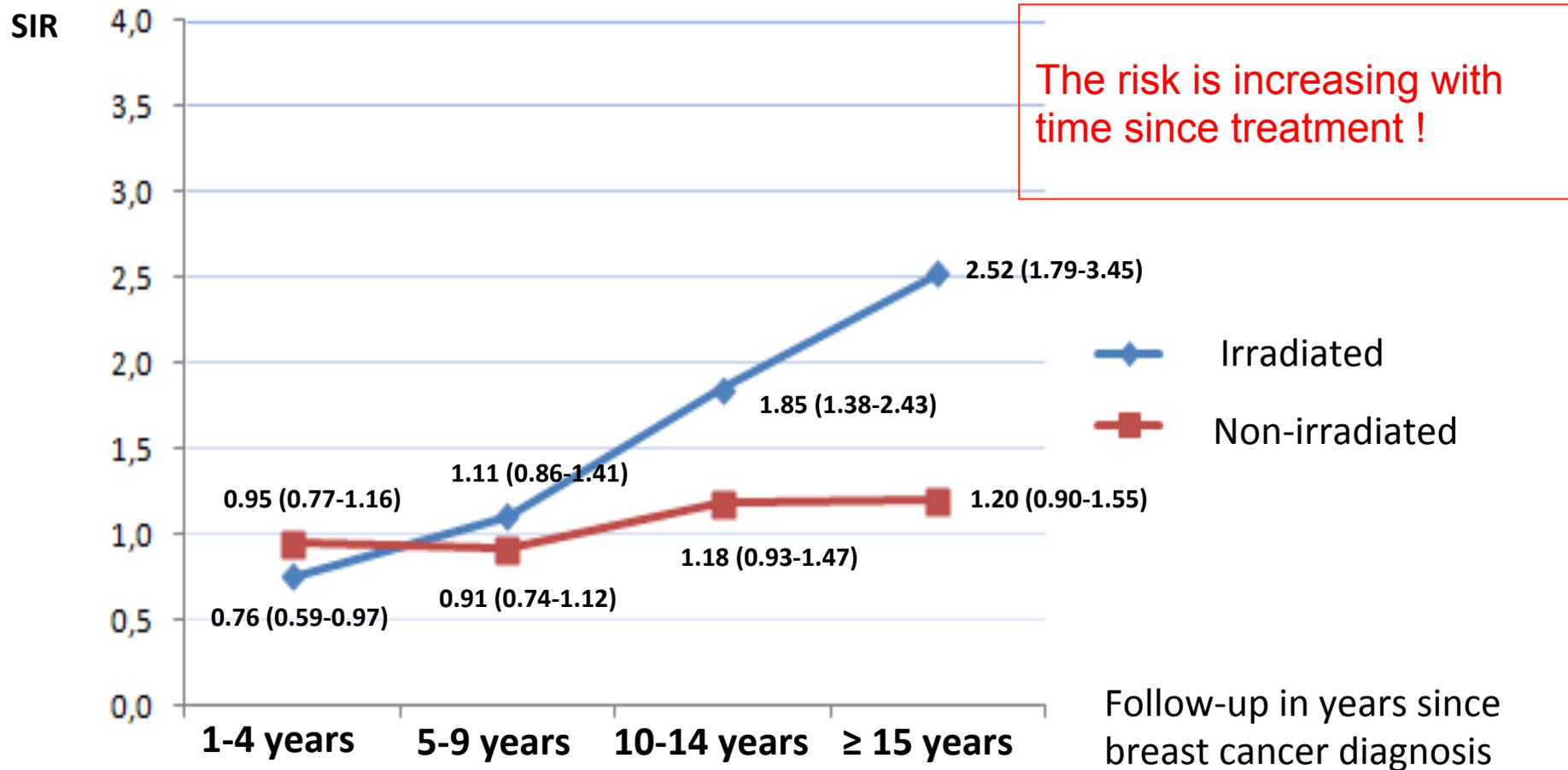
- Some examples:
  - Pain in breast and shoulder region
  - Lymph edema
  - Poly-neuropathy after treatment with taxanes



Late effects seen in all age groups, but with higher impact among young women

- Some examples
  - Risk of secondary cancer
  - Decreasing bone mass
  - Depression
  - Fear of recurrence

# Radiotherapy associated locations



Grantzau T  
PhD thesis 2014

# Depression

A Danish study of 3343 women with primary breast cancer

- Depression:
  - 13,7% of the women had a score, making a depression likely
- There was an increased risk of depression if the women:
  - Were younger
  - Were Divorced
  - Had a low income
  - Had a low level of physical functioning
  - Previously have had psychiatric morbidity
  - Were smoker

This is consistently found in studies of depression in women treated for breast cancer

# Fear of recurrence

- The thought about the cancer coming back is something most cancer survivors have to deal with.
- A study from US of 1128 breast cancer survivors,

**Table 2. Concerns About Recurrence Scale Differences Between Women Diagnosed at Younger and Older Ages<sup>a</sup>**

Variable	Younger (N = 505)		Older (N = 623)		t*
	$\bar{X}$	SD	$\bar{X}$	SD	
Fear of recurrence index	12.2	5.2	8.8	4.5	10.1
Health worries	17.7	10.7	12.5	10.4	7.3
Role worries	7.8	5.5	4.5	4.6	9.4
Womanhood worries	5.1	6.2	2.3	4.3	7.7
Death worries	4.7	2.6	3	2.5	10.2
Parenting worries	3.6	2.8	1.1	1.7	15.4

\*p < 0.001

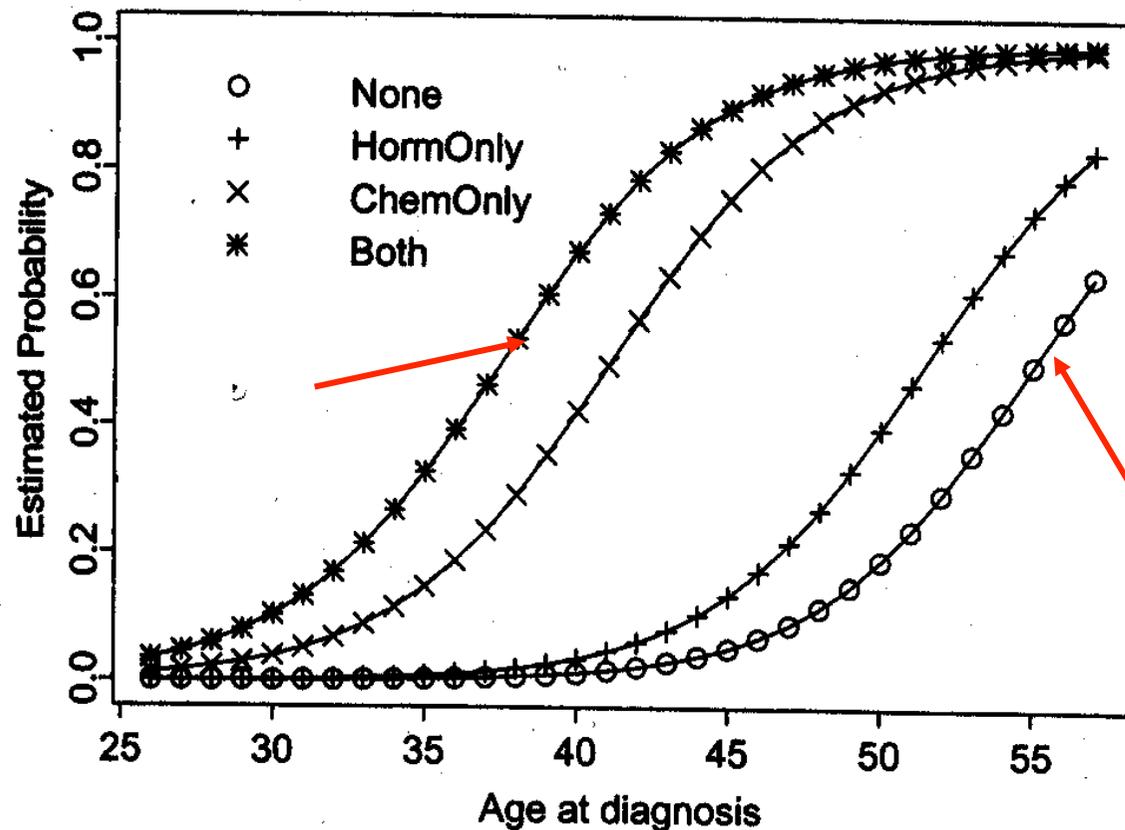
<sup>a</sup>“Younger” refers to participants diagnosed at age 45 or younger; “older” refers to participants diagnosed from age 55–70.

# Late effects seen only in young women

- Premature menopause
- Infertility

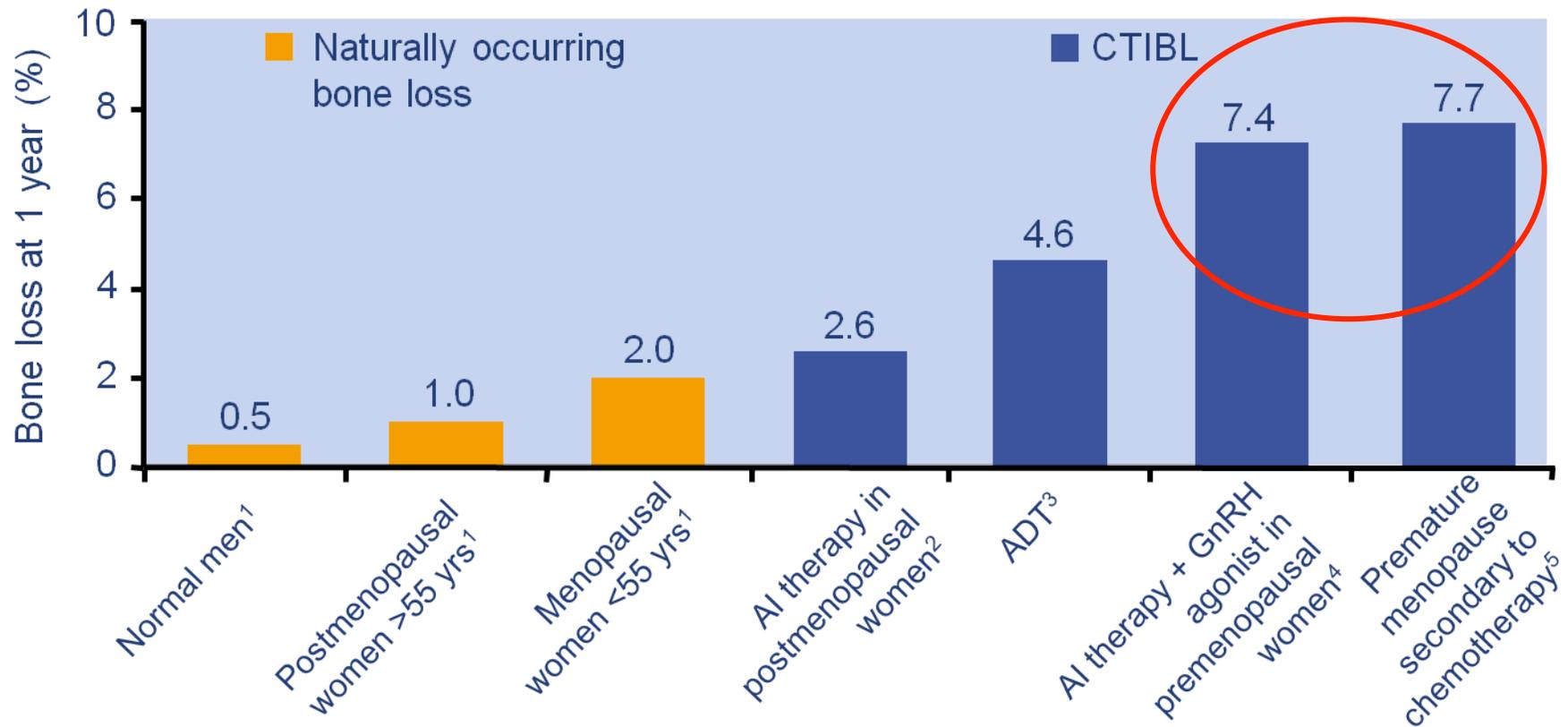


# The likelihood of premature menopause following cancer treatment



**Fig 1. Probability of menopause during the first year after diagnosis of breast cancer. Reprinted with permission.<sup>16</sup>**

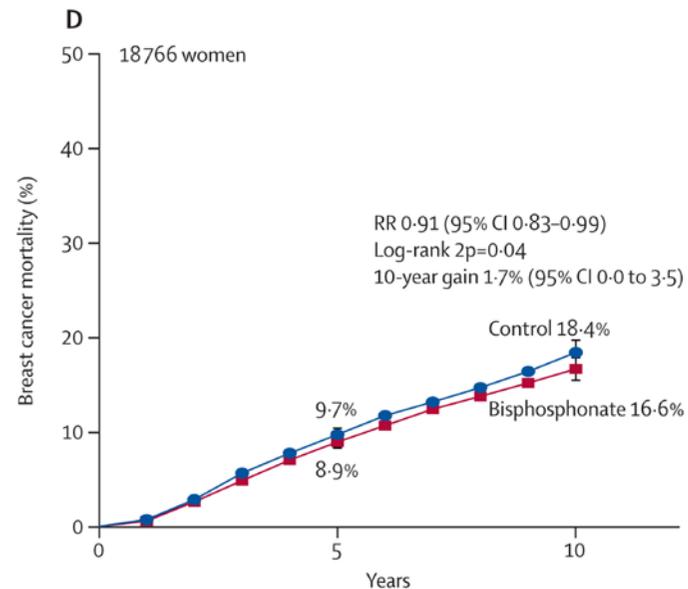
# Cancer Treatment Induced Bone Loss (CTIBL)



1. Higano CS. *Nat Clin Pract Urol*. 2008;5:24-34;
2. Eastell R, et al. *J Bone Miner Res* 2006;21:1215-23;
3. Maillefert JF, et al. *J Urol* 1999; 161:1219-22;
4. Gnani MF, et al. *Lancet Oncol* 2008;9:840-9;
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# One more reason for adjuvant bisphosphonate treatment

- In spring 2016, DBCG decided to offer adjuvant bisphosphonate treatment to all postmenopausal patients, also those being post menopausal due to treatment with goserelin.



Death rates (%/year: total rate minus rate in women without recurrences) and log-rank statistics

Allocation	Years 0-4	Years 5-9	Years ≥10
Bisphosphonate	1.83 (1.70-1.97)	1.81 (1.59-2.03)	1.21 (0.72-1.69)
Control	1.98 (1.84-2.12)	1.97 (1.75-2.20)	1.69 (1.12-2.25)
Rate ratio (95% CI)	0.91 (0.81-1.01)	0.92 (0.75-1.10)	0.66 (0.18-1.15)
from (O-E)/V	-30.5/321.7	-9.5/121.0	-4.5/10.9

# Premature menopause induces

- Infertility
  - Hot flashes
  - Night sweating
  - Vaginal dryness
  - Sexual problems
  - Weight gain
- and tamoxifen treatment add to these problems, during 5 to 10 years of treatment

*These problems seems to be larger,  
have a more sudden onset,  
then in women going through  
a natural menopause*

## Consequences for follow-up of the young patients

- Women treated with chemotherapy, should be considered for DXA-scans to monitor their bone health
- Follow-up during endocrine treatment should focus on late side effects
- Young women still having their periods after treatment, should be knowledgeable about the risk of premature menopause

# Possible additional problems

## **Cardio-vascular diseases:**

- In studies of "premature ovarian failure" in general, a higher incidence of cardio-vascular diseases is found

## **Cognitive problems:**

- Some studies have shown cognitive problems related to aromatase inhibitors.
- A theory has been proposed, that this cognitive impairment is due to a lower level of estrogen
- *Could the same be the case among young breast cancer survivor due to treatment induces menopause?*

# Conclusion

- Young women have more severe late effects, than older women
- The premature menopause have severe impact, both physiological and psychological
- Some late effects represent an ongoing health problem for the young women, especially when they get older
- **Late effects in young breast cancer patients needs specific attention**

Thank you, for your attention

