

# Late effects after breast cancer treatment - an overview

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# What is the potential size of the problem

- The number of new breast cancer patients per year is around 4.500 cases
- The newest data from DBCG register point to a cure rate of above 80 %
- Estimated 60.000 women in Denmark has been treated for breast cancer

# Why talking about late effects

- Because:
  - As we cure more patients, the number of women with problems increases
  - The better treatment outcome, is also based on more intensive treatments,
    - primary the medical treatment
  - Maybe, also because our patients is not satisfied with just being cured

# Late effects, some examples

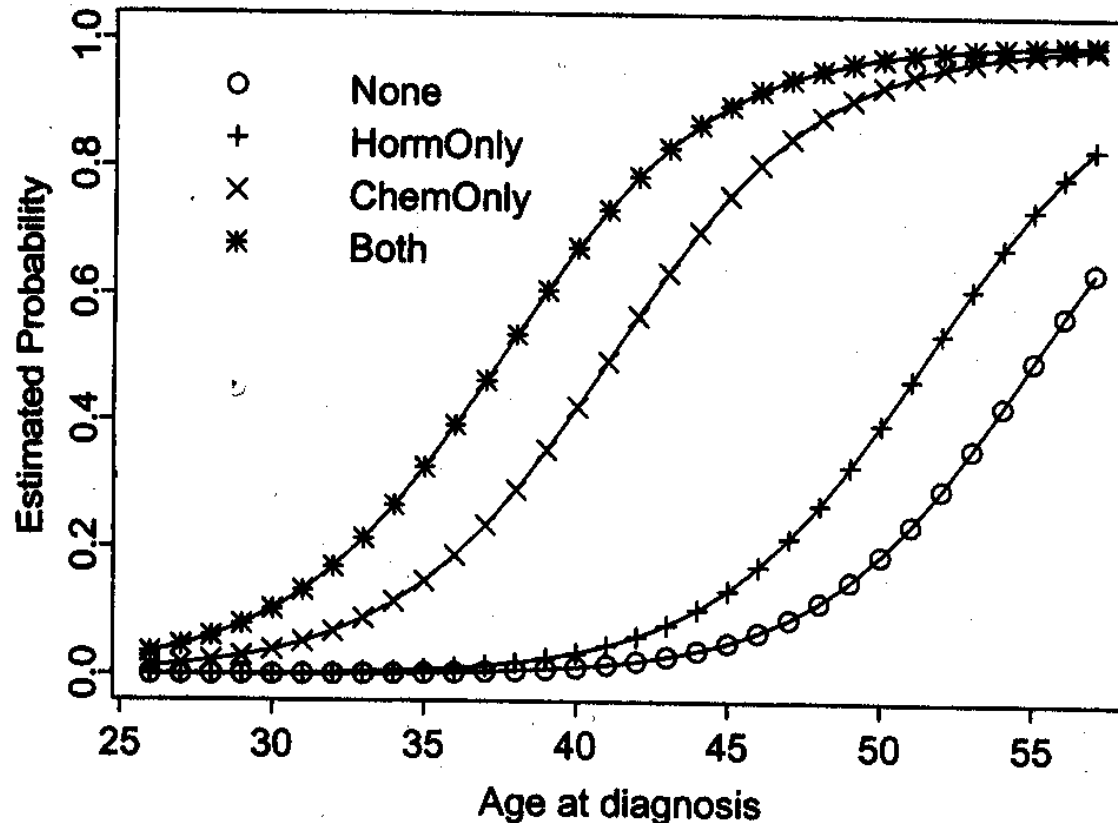
- Can be physical problems as:
  - pain
  - lymph edema
  - poly-neuropathy
  - gynecologic problems
  - cardiac dysfunction
  - secondary cancer
- Can be psychological problems as:
  - depression
  - sleep disorders
  - fear of recurrence
- Can be social problems as:
  - unemployment
  - social isolation



# Late effects, comes in different sizes

- Something
  - that just is there, but without impact upon daily life
  - that borrows the women, but with slight, if any impact
  - that influences daily living
  - that require treatment
  - that can reduce survival time

# The likelihood of premature menopause following cancer treatment



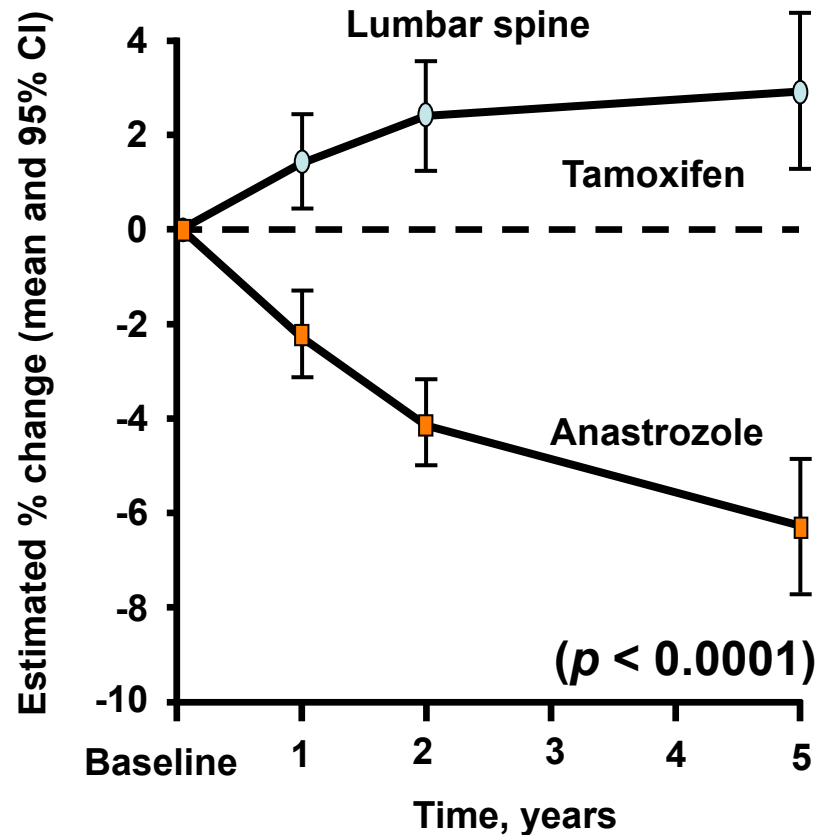
**Fig 1. Probability of menopause during the first year after diagnosis of breast cancer. Reprinted with permission.<sup>16</sup>**

# Gynecological late effects

- Hot flashes
  - experienced by 40% of the women
- Vaginal dryness
  - experienced by 50% of the women
- Decreased libido
  - experienced by 30% of the women
- Sexual dysfunction,
  - experienced by 60% of the women

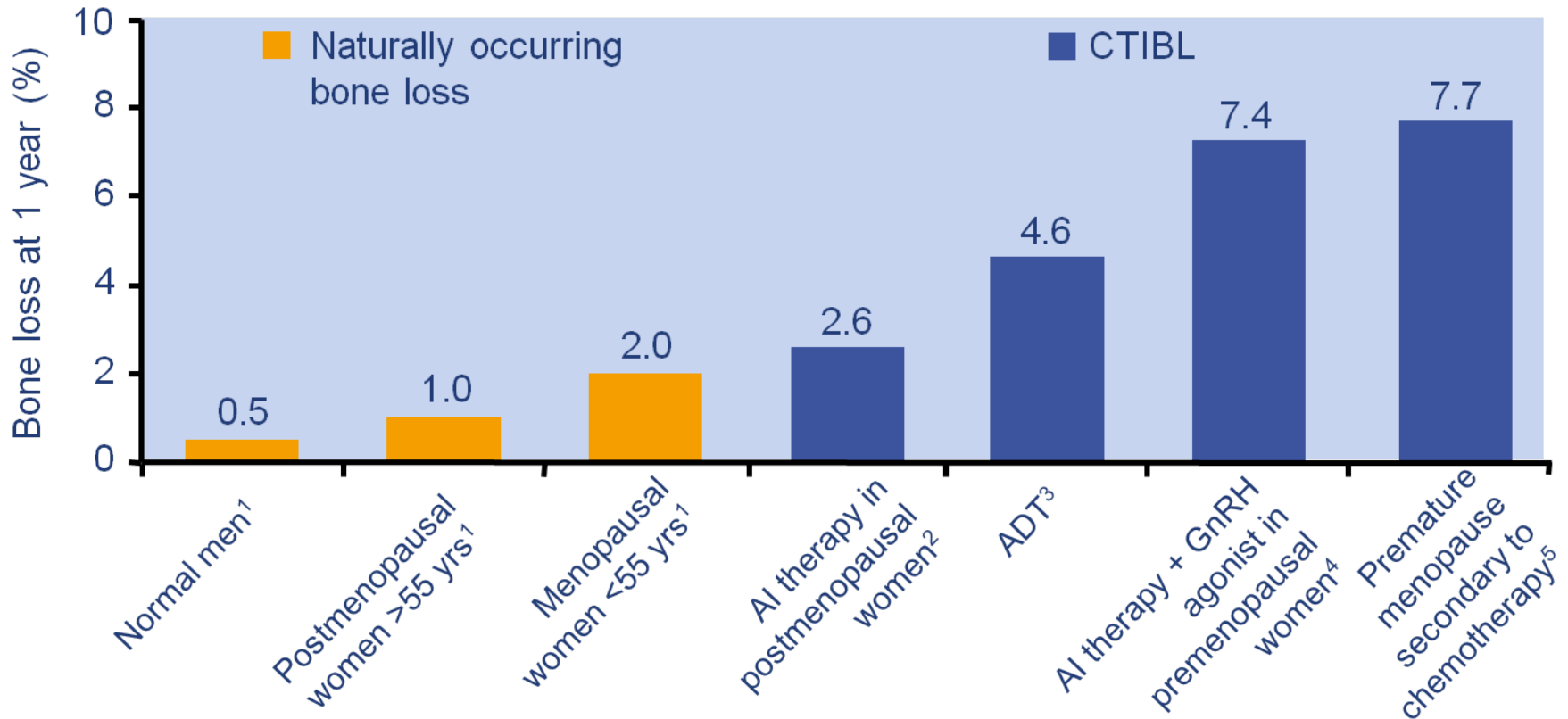
# Impact upon bone health

Data from a substudy of ATAC (similar data with all AIs)





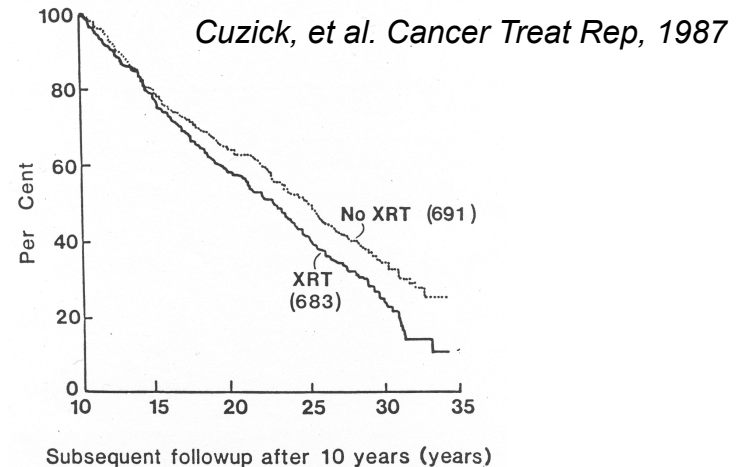
# Cancer Treatment Induced Bone Loss (CTIBL)



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. Maillfert JF, et al. *J Urol* 1999; 161:1219-22;
4. Gnant MF, et al. *Lancet Oncol* 2008;9:840-9;
5. Shapiro CL, et al. *J Clin Oncol* 2001;19:3306-11.

# Cardiac dysfunction

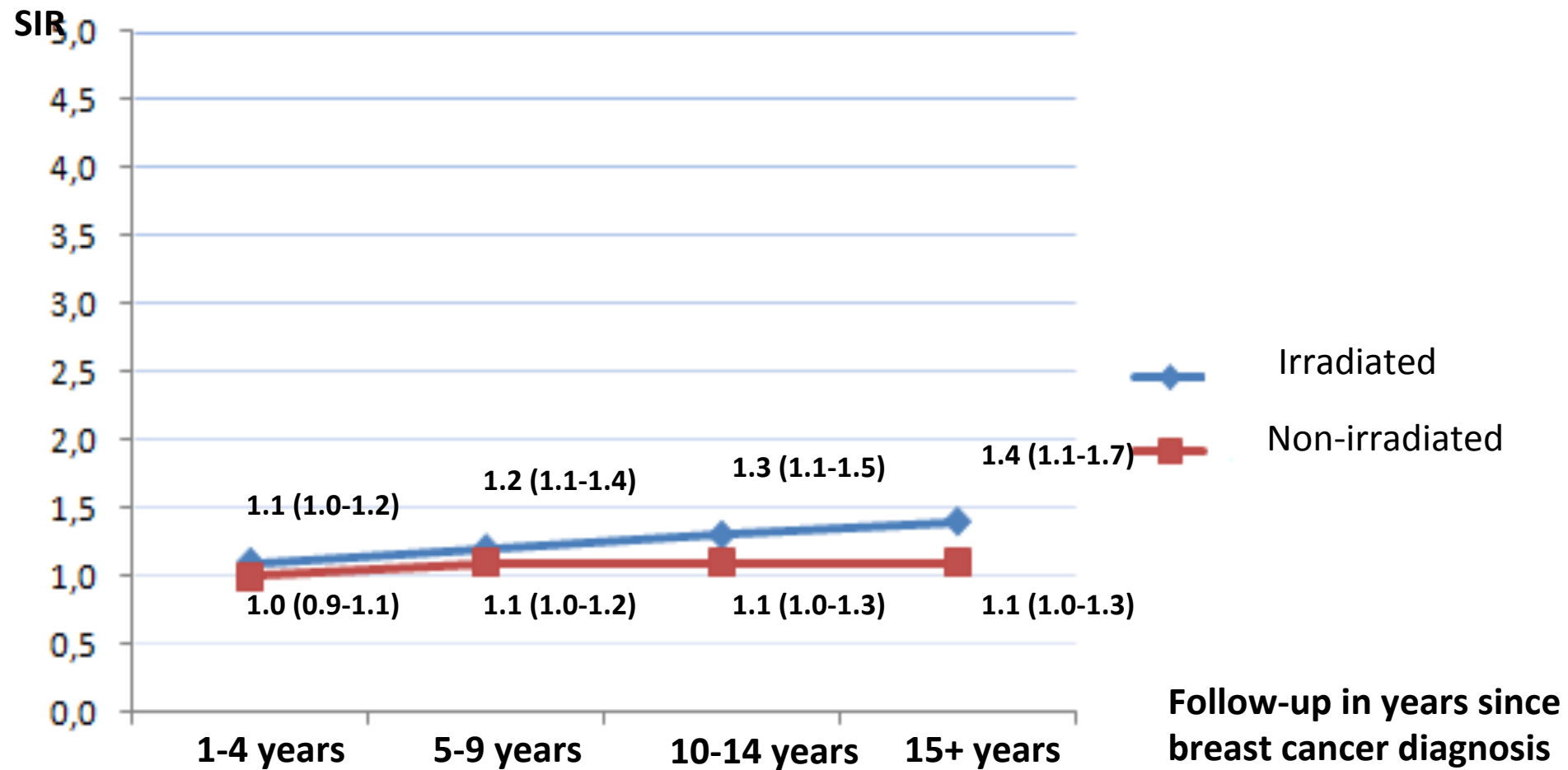
- Can be seen in relation to:
  - Radiotherapy



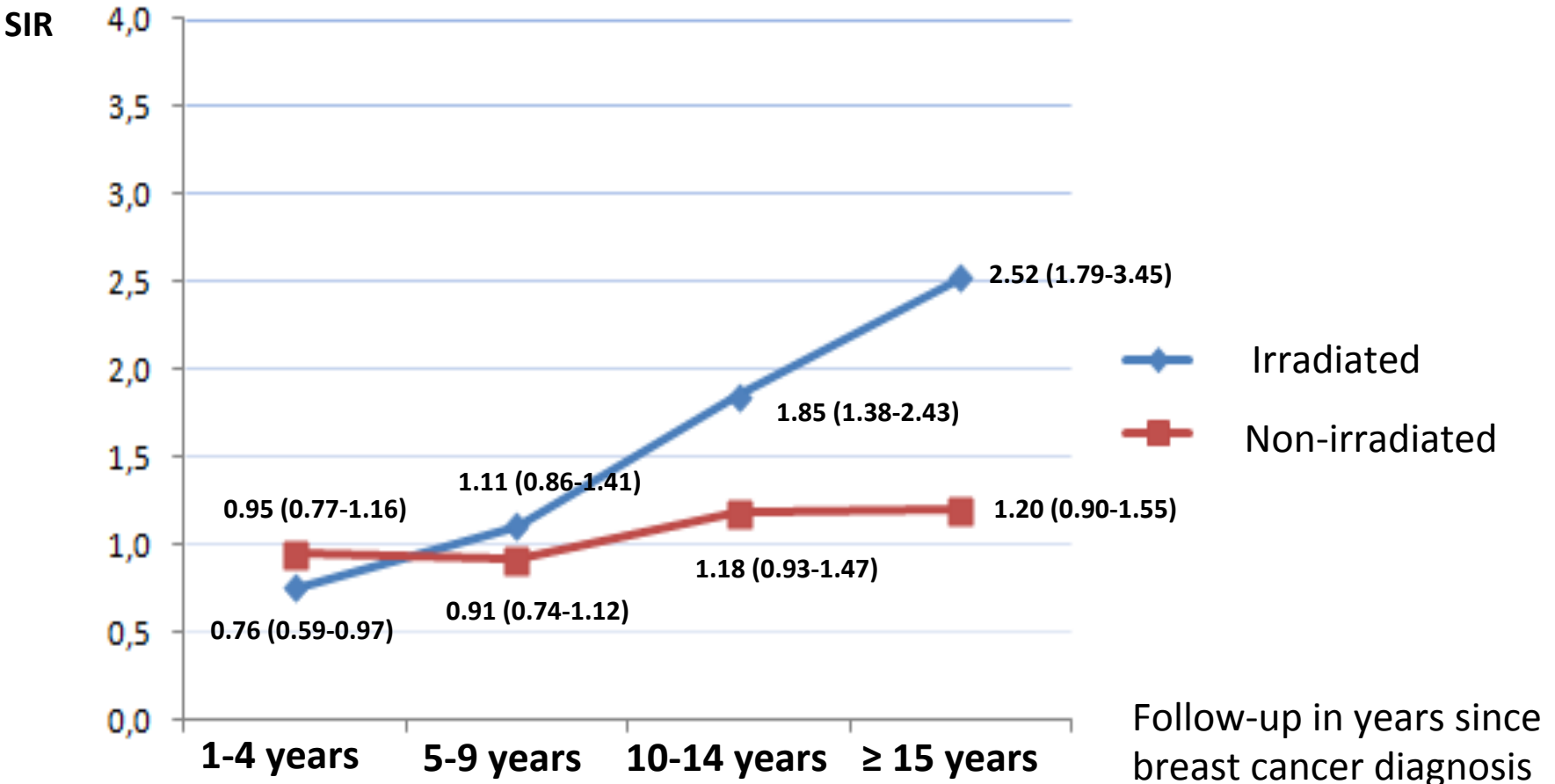
- chemotherapy, with antracyclines
- trastuzumab
  - *Both can lead to heart failure, either transient (trastuzumab) or chronic (antracyclines)*

# Secondary cancer

*SIR= relative risk compared to the background population*



# Radiotherapy associated locations



# 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

# Sleep disorder

- Sleep disorder
  - 57,9% of the women experienced disrupted or poor sleep
- There were an increased risk of sleep disorder, if the women:
  - Were older
  - Had depressive symptoms
  - Had anxiety symptoms
  - Had a low level of physical functioning
  - Were smoker

# Fear of recurrence

- The thought about the cancer coming back is something most cancer survivors have to deal with.
- When these thoughts turn into fear, it become a larger challenge for the women
- A german study including 1083 women treated for breast cancer found:
  - 17% showed moderate fear of recurrence
  - 9% showed high fear of recurrence
  - No significant decline over time

A Mehnart et al Psycho-Oncology 2009

# Conclusion

- There are a row of severe consequences of modern cancer treatment
- Late effects leads to decreased quality of life in cancer survivors
- Late effects can represent serious health problems
- **Late effects after treatment for breast cancer is a major challenge, which needs must more attention**