

# HRT IN BRCA CARRIERS following RRBSO

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- Is it effective?

- Is it safe?

**- *Very Little data***

**- *Reviews > Studies***

# QOL AFTER RRBSO

Madalinska *et al* / J Clin Oncol 2006

- Premenopausal women with BRCA mutation
- 286 women undergoing gynecological screening ( no surgery )
- 164 women post RRBSO
  - 77 HRT -
  - 87 NO HRT

Significantly less menopausal symptoms in HRT vs. No HRT

Significantly more symptoms in HRT vs. no surgery group

# QOL AFTER RRBSO

## Finch *et al* Gynecol Oncol 2011

- Prospective study 114 women surveyed prior to surgery and 1 year following surgery
- 66 % premenopausal , 47 % previous diagnosis of breast cancer
- Woman on HRT – significantly less menopausal symptoms
- HRT didn't prevent post surgery decline in sexual satisfaction

# BSO in young patients without HRT

- Bone health
- Cardiac Mortality HR 1.8
- Cognitive impairment/dementia HR 1.9

# Osteoporosis risk and management in BRCA1 and BRCA2 carriers who undergo RRBSO

Garcia *et al* Gynecol Oncol 2015

- 225 women - median f-u 41 months
- Only 44% of BRCA carriers had a DXA scan after RRBSO
- 68% of DXA scans were abnormal.
- 4% rate of atraumatic fracture

# Use of TAH and HRT in BRCA1 and BRCA2 mutation carriers undergoing RRSO

Gabriel *et al* Fam Cancer 2009

- Single institution study 73 carriers
- Majority of BRCA1/2 mutation carriers undergoing RRSO also underwent TAH
- A substantial number took HRT.
- ***TAH did not increase the likelihood of taking HRT compared to RRSO alone.***

# Is HRT safe?

Effect of Short-Term Hormone Replacement Therapy on Breast Cancer Risk Reduction After Bilateral Prophylactic Oophorectomy in BRCA1 and BRCA2 Mutation Carriers:

The PROSE Study Group

Rebbeck *et al* J Clin Oncol 2005



# PROSE Study

- Prospective cohort of 462 women with BRCA1/2 mutation
- Incidence of breast cancer
  - 155 patients after RRBSO +/- HRT
  - 307 with no surgery
- Median F-U 3.6 years
- “Short term HRT”

# Breast cancer risk reduction after BSO stratified by postsurgical HRT use

		Total sample			BSO BEFORE AGE 50		
variable		No.	HR	95%CL*	No.	HR	95%CL*
No surgery	No HRT	286	1.0	-	286	1.0	-
BSO	No HRT	62	0.38	0.09 to 1.59	50	0.59	0.14 to 2.52
BSO	Any HRT	93	0.37	0.14 to 0.96	89	0.3	0.11 to 0.85
BSO	E2 only	50	0.44	0.12 to 1.61	50	0.44	0.12 to 1.61
BSO	PROG±E2	34	0.43	0.07 to 2.68	34	0.43	0.07 to 2.68

Abbreviations BSO, bilateral prophylactic, HRT, hormone replacement therapy, HR, hazard ratio, E2,estrogen, PROG, progesterone

\*adjusted for birth year, BRCA1 versus BRCA2 center of ascertainment, and parity

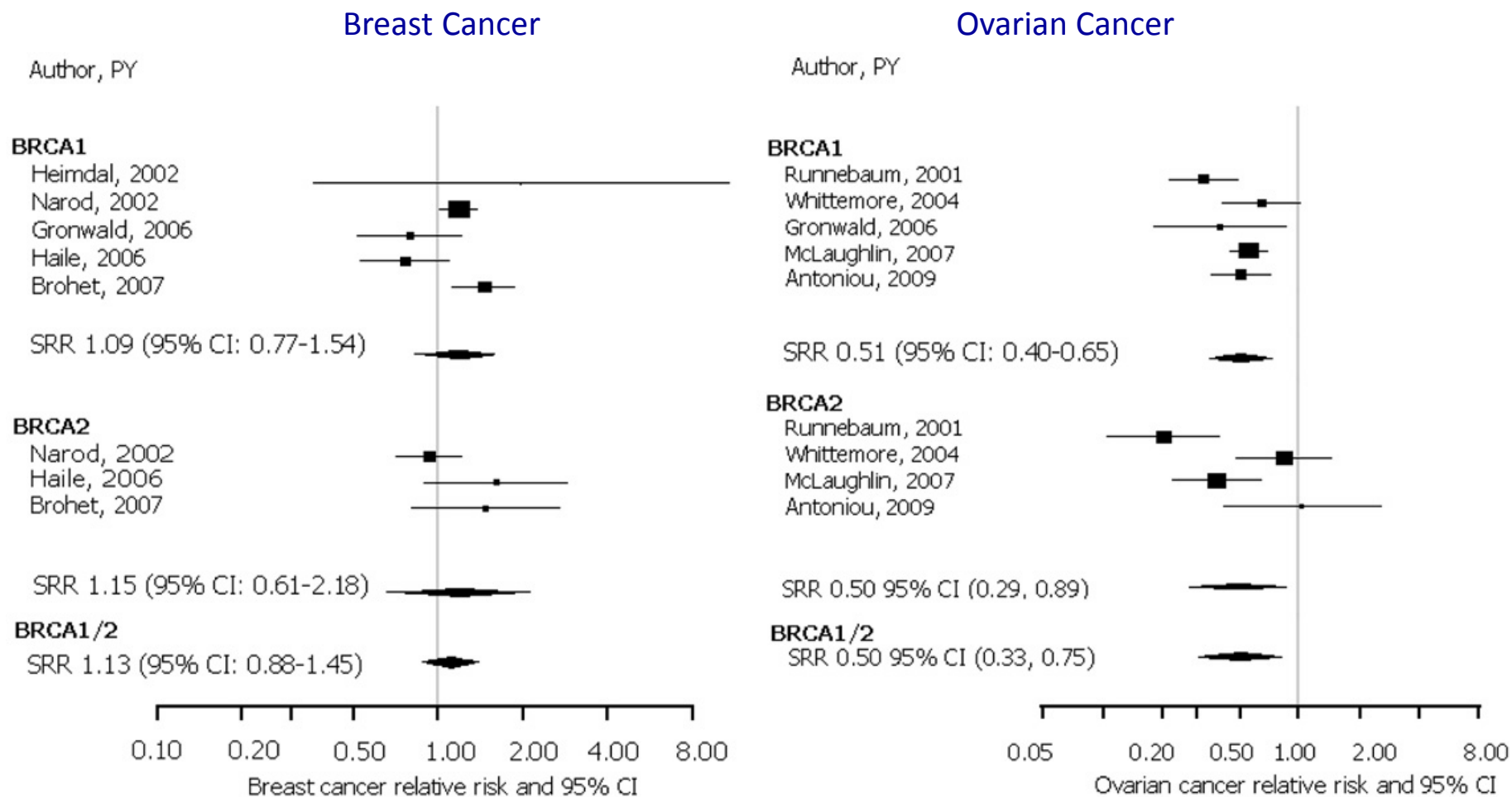
# Problems with PROSE study

- “ Short term HRT”
  - not defined
  - no data on duration provided
- Underpowered
- Biological plausibility

- Can we have reassurance from OC in BRCA carriers studies?

# Oral contraceptive use and breast or ovarian cancer risk in IBRCA1/2 carriers: A meta-analysis

Iodice et al Eur J Cancer 2010



Forest plot and summary relative risk on the association between OC use and breast cancer (left) and ovarian cancer (right) in carriers.

PY: publication year; SRR: Summary Relative Risk; CI confidence intervals