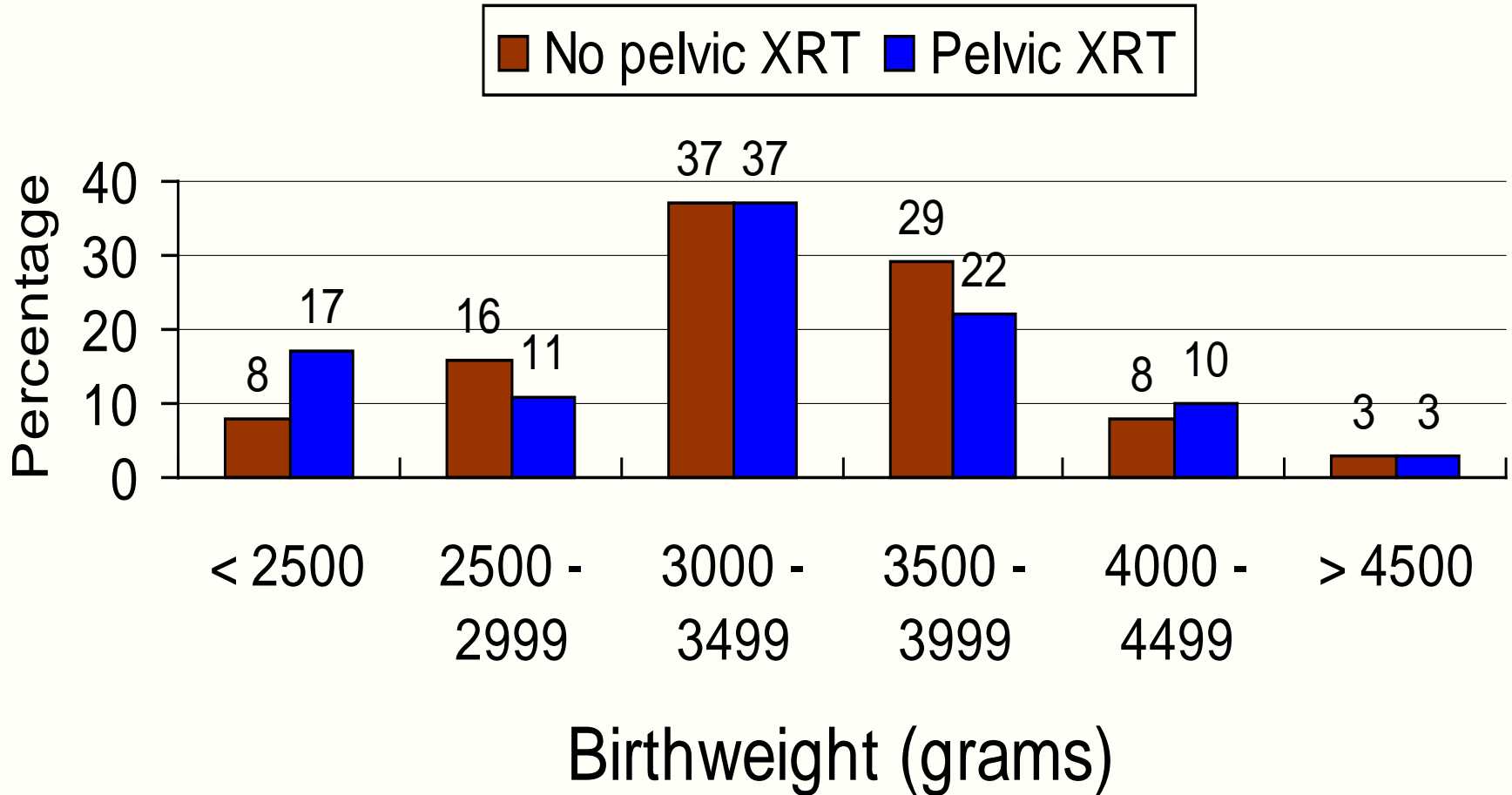
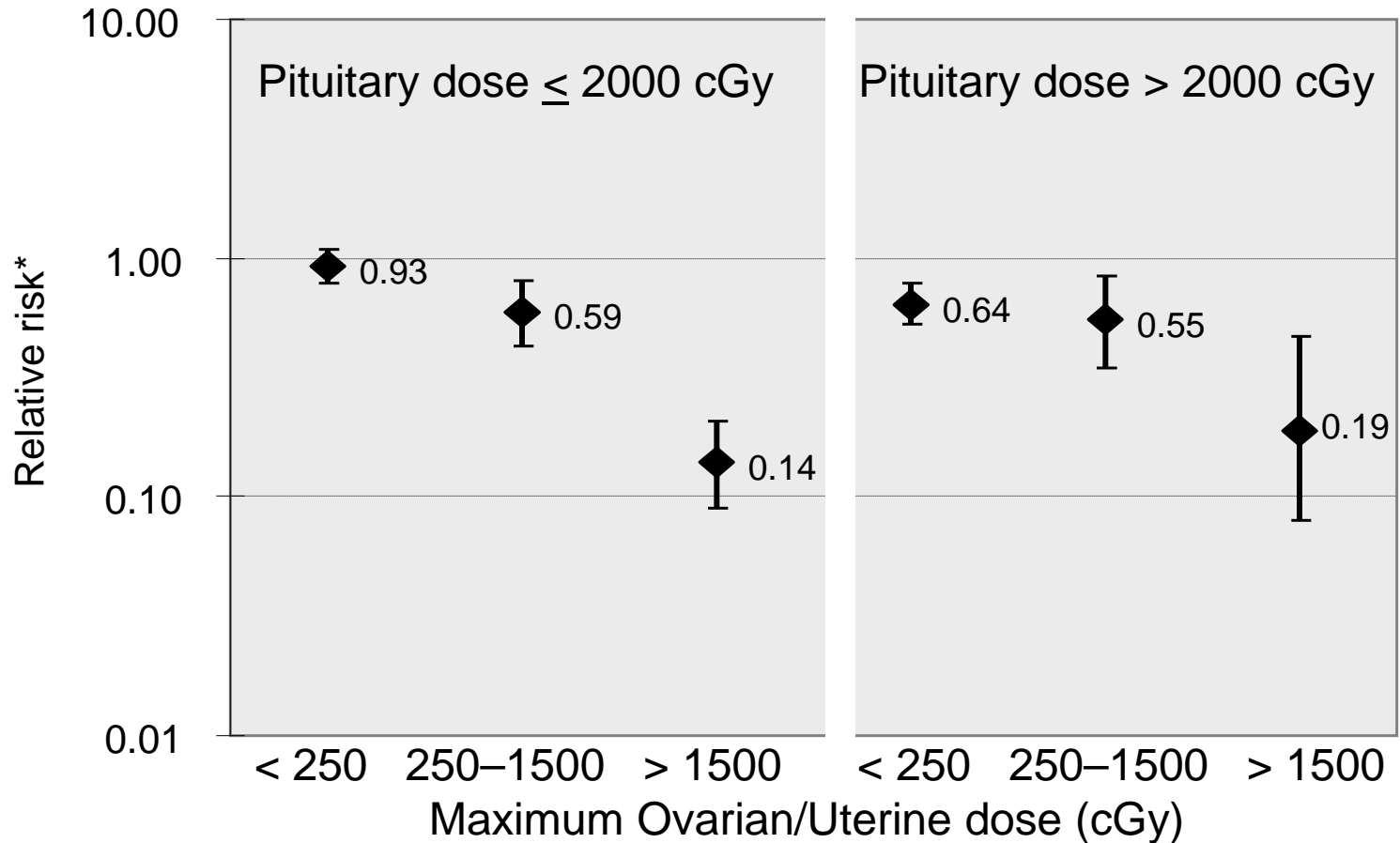


- Pregnancy outcome of females and partners of males
- Fertility of males
- Fertility of females

Pregnancy Outcome of Females

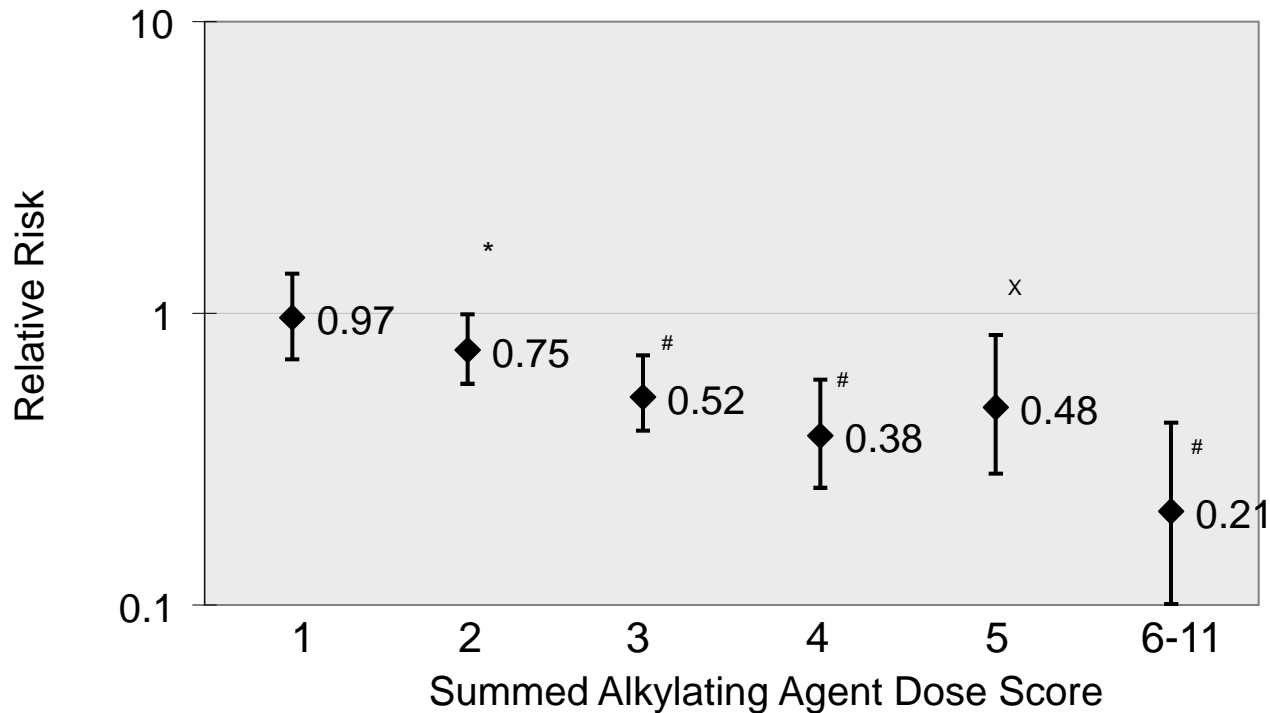


Risk of Fertility According to Pituitary and Ovarian Radiation Exposure (Females)



* Adjusted for age at diagnosis, race/ethnicity, education, marital status, smoking status, alkylating agent, oophorectomy

Risk of Fertility by Alkylating Agent Exposure (Summed Score) (Males)



* p-value <0.05, x p-value <0.01, # p-value <0.0001

* Adjusted for age at diagnosis, race/ethnicity, education, marital status, smoking status, fecundity

Topics Under Development

- Reproductive concerns
- Update pregnancy outcome
- Relationship between pregnancy and disease recurrence (Sklar, Rokitka) – awaiting 2008 update
- Assisted reproduction

Gaps in Knowledge

- Utilization of fertility preservation methods by CCSS participants
 - Is utilization influenced by reproductive concerns of participants?
 - Risk of cancer in offspring (genetic predisposition, exposure induced)
 - Risk of other adverse health outcomes in offspring
 - Risk of disease recurrence in or early mortality of CCSS participant
- Genetic determinants of risk for infertility
 - Study phase I and phase II polymorphisms in cohort - Increased frequency of rapid inactivators among fertile patients treated with sterilizing doses of alkylating agents? Increased frequency of rapid activators among infertile patients treated with non-sterilizing doses of alkylating agents?
 - Estrogen receptor gene polymorphisms, anti-Mullerian hormone type II receptor gene polymorphisms and CYP1B1-4 polymorphisms and premature menopause

Gaps in Knowledge

- Health outcomes of offspring
 - Cancer
 - Mortality
- Uterine radiation dose-response relationship for pregnancy outcome
- Pituitary radiation dose-response relationship for pregnancy outcome
- Modification of radiation dose-response relationship by actinomycin D and/or doxorubicin
- Alkylating agent dose-response relationship for pregnancy outcome

Analysis Concepts Based on Existing Data

- Uterine radiation dose-response relationship for pregnancy outcome, including modification by drug exposures
- Pituitary radiation dose-response relationship for pregnancy outcome, including modification by drug exposures
- Alkylating agent dose-response relationship for pregnancy outcome

Analysis Concepts Based on Future Data

- Health outcomes of offspring (include in next update questionnaire)
- Fertility of males and females – role of ifosfamide? (expanded cohort)
- Reproductive concerns – measure development and validation

Ancillary Studies – Non-Interventional Research

- Genetic determinants of risk for infertility

Ancillary Studies – Interventional Research

- Utilization of fertility preservation services

Application of Intent

- Please submit topic related Application of Intent for analysis Concept or Ancillary Study using form at the CCSS website

<https://hospital.stjude.org/apps/hospitalforms/fb/ccssAppOfIntent>