

Childhood cancer Survivorship.

<http://www.kidscancer.bc.ca>

Dr C Fryer BC's Children's Hospital
No conflict of Interest

Late Effects in Childhood Cancer Survivors: a Review with a Framing Effect Bias?

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Accepted for publication Ped Blood Cancer 2010

- Most publications report the adverse health issues in childhood cancer survivors.

Childhood's Cures Haunted by Adulthood's 'Late Effects'

Science June 2010 Jenny Marder (is a writer in Washington, D.C)

- Roughly 40% of cancer survivors will develop life-threatening health problems within 30 years of their initial cancer diagnosis, according to a 2006 study.
- The list of cancer therapy's late effects is long and troubling. It includes not just second cancers but strokes, bone damage, and obesity. Lungs can scar and stiffen, making it hard to breathe. Heart muscles can weaken and become flabby, unable to pump blood.
- Not everyone develops problems, however; 25% remain healthy.. Few childhood cancer survivors have been followed for more than 30 years.

Late Effects in Childhood Cancer Survivors: a Review with a Framing Effect Bias?

Dr C. Fryer Accepted for publication *Ped Blood Cancer* 2010

- Presenting information to the newly diagnosed patient in a positive manner is advocated, while noting that recurrence is the most likely adverse event.

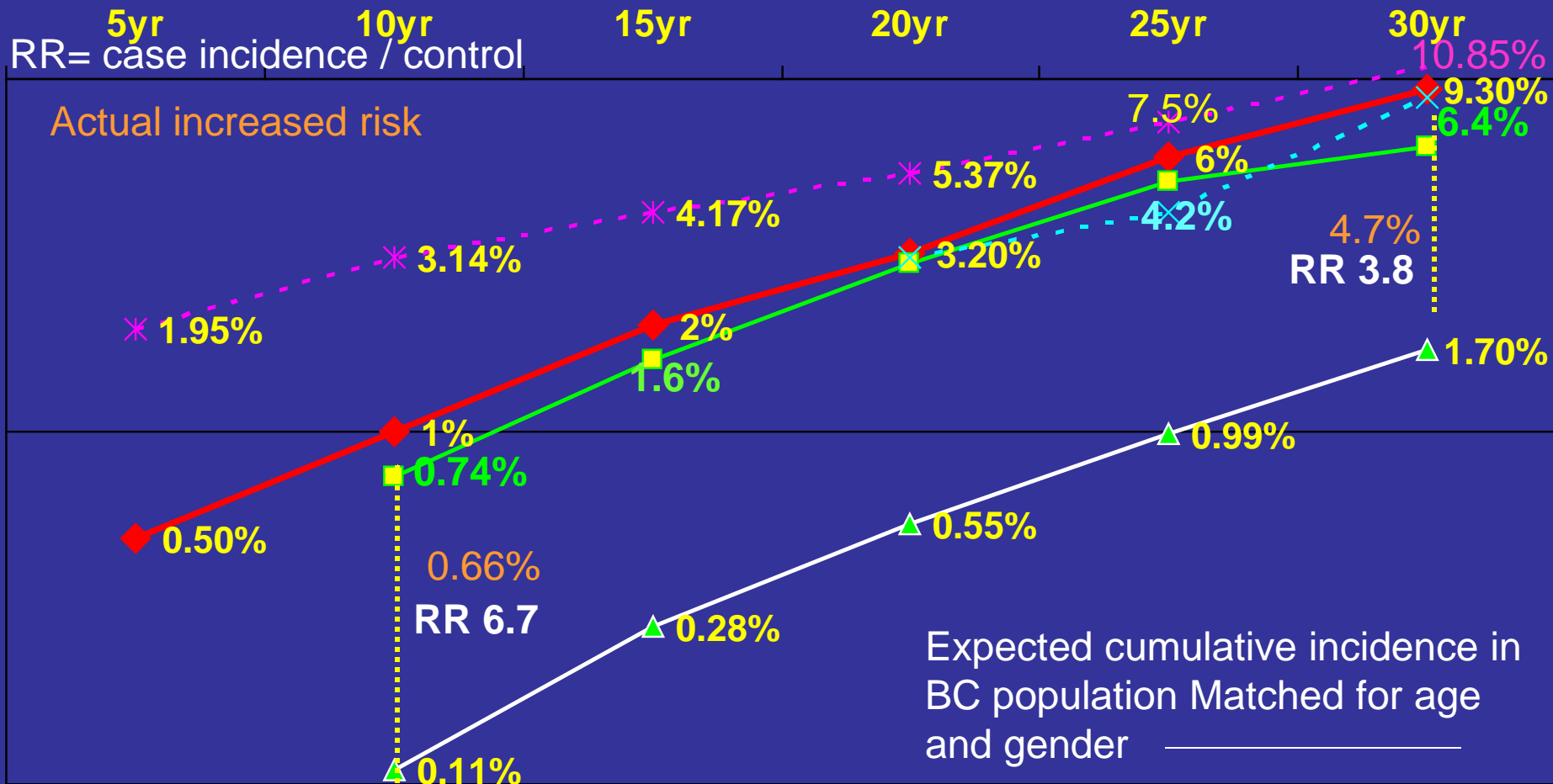
Late effects in perspective

Re-analysis of population based studies on life threatening toxicities from Nordic, Dutch, United Kingdom, French, Italian and N. American publications, shows the following:

- Recurrence is the most likely adverse event even 20years post Rx.
- 5-year survivors have a **near normal life expectancy**.
- 75% have no severe or life-threatening **treatment** related toxicity.
- 87% remain free of a **second malignancy**.
- Children who received **radiation or anthracycline > 250-300 mg/m²** are at greatest risk for treatment related toxicities.
- Survivors of **brain tumours** are the most likely group to have **impaired quality of life**.

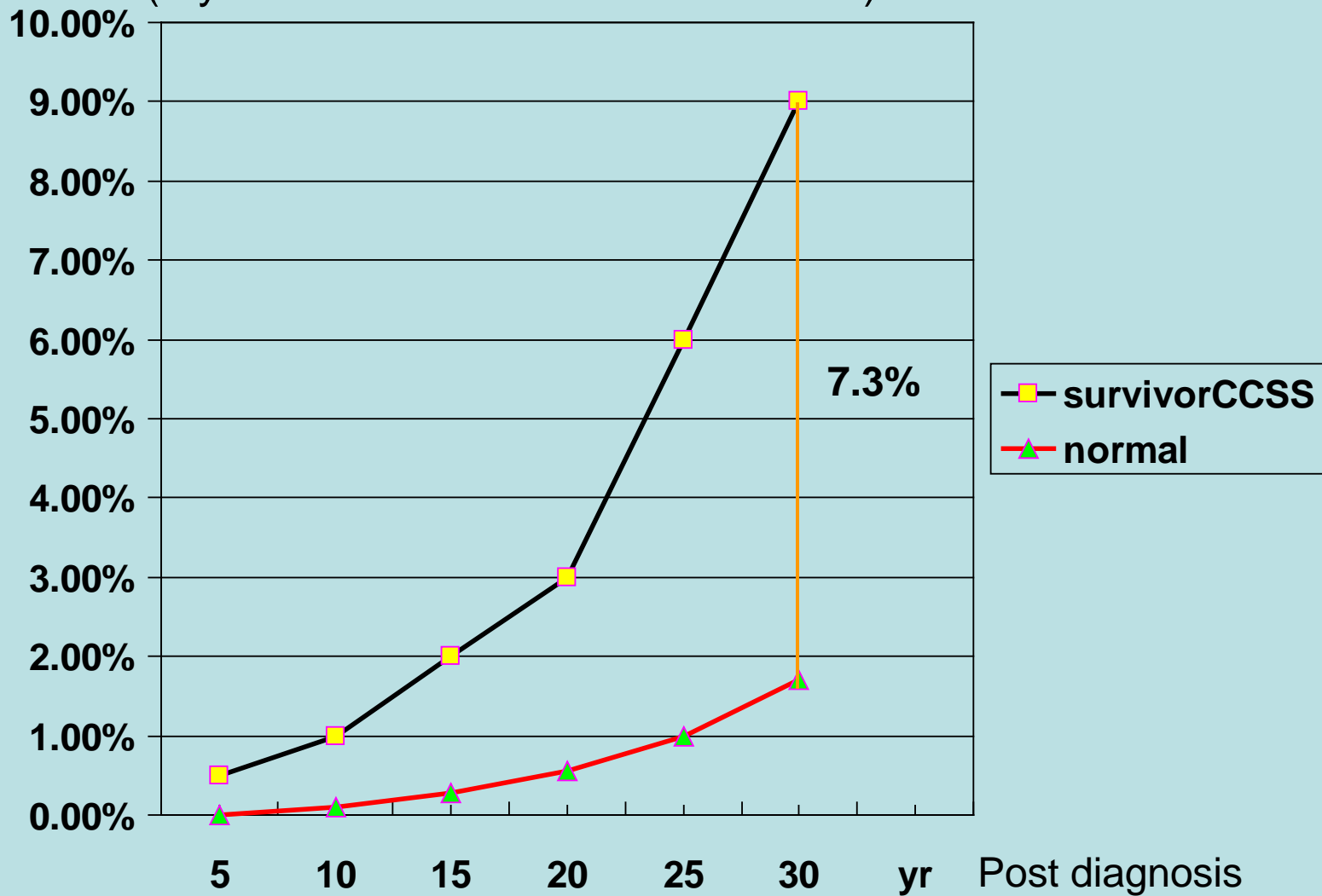
Cumulative Incidence of second cancers

Post diagnosis

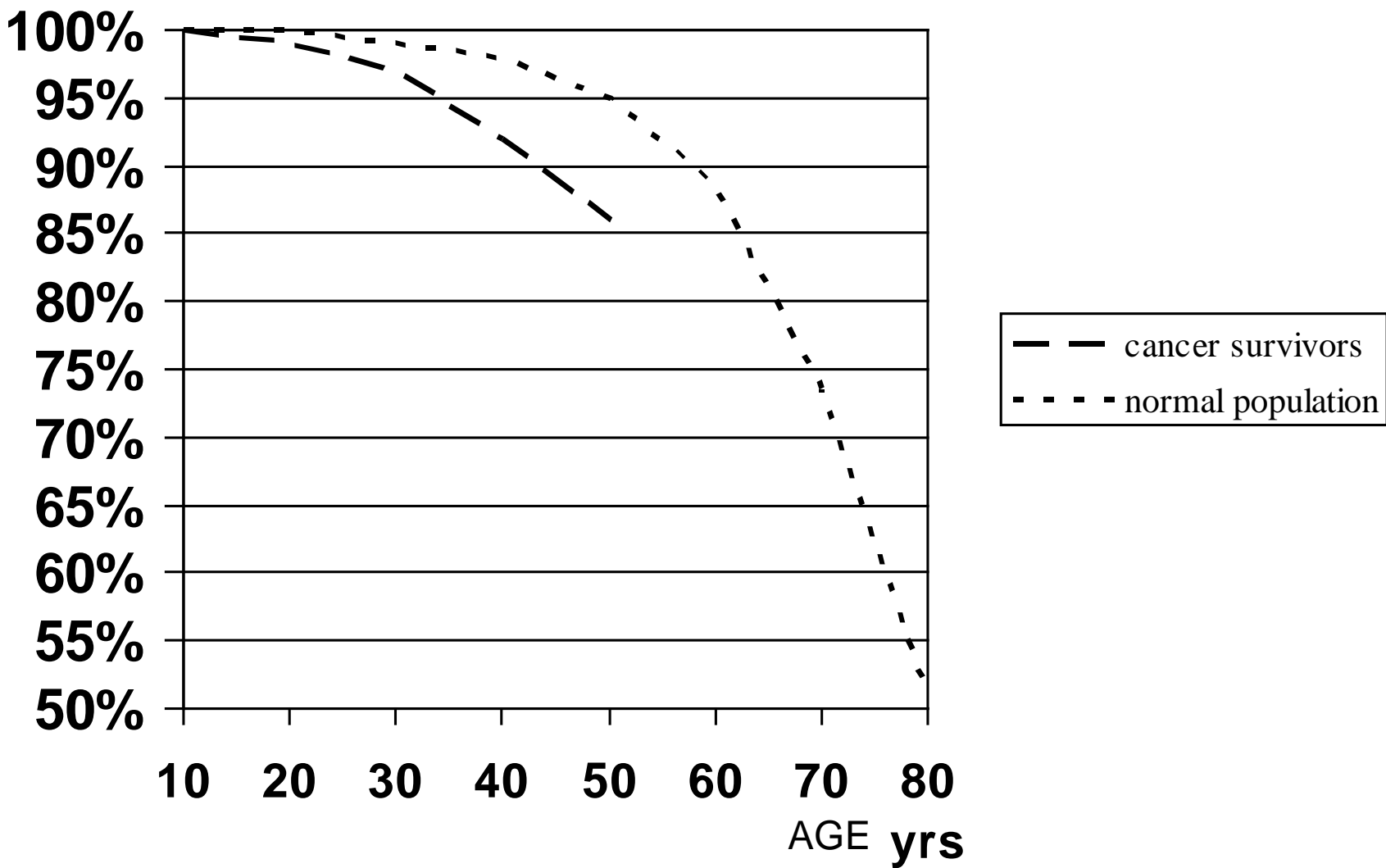


◆ CCSS
 ■ BCCA
 ▲ Norm
 ✕ UK data
 ✱ ALL St Judes'

Cumulative incidence of SMN CCSS data (thyroid and breast account for 36%)



Freedom from second malignancy in 90,000 + survivors of childhood cancer by age and incidence of cancer in the normal United States population excluding non melanomatous skin cancer.



Cardiotoxicity

- 95% of children receiving <250 mg/m² cumulative dose of anthracyclines have no grade 3-4 toxicity.
- In the CCSS data, patients receiving <250 mg/m² cumulative dose of anthracyclines had a cumulative incidence of congestive cardiac failure of 2.5% at 30 years.
- In the French-British cohort study the increased cumulative cardiovascular mortality over the general population was only 1.5%. Importantly there was no increased mortality for patients who received < 239 mg/m² and only a marginal increase (RR 1.3) for dose range 240-359mg/m².
- Although subclinical cardiac abnormalities have been reported as having a higher incidence, the significance is unclear. It is reassuring that at doses < 240 mg/m² no deterioration in cardiac function was noted over time.

Long Term Follow Up of Childhood Cancer Survivors

- Why ?
- Who ?
- How ?
- When ?

The why:

- The health professional has an ethical and legal responsibility to inform the patient not only of the known risks associated with therapy at the time of diagnosis **but also regarding new information as it becomes available.**
- Such a responsibility can best be fulfilled by having a surveillance system conducted by health professionals with access to the latest information on the sequelae as they relate to adult survivors of childhood cancer.
- Opportunity for active intervention.
- Acquire late effects information on newer therapies.

The who: 3 groups

- ❑ Unlikely to have significant health risks
- ❑ Increased risk for health problems
- ❑ Already have significant health problems.

The how: at transition from BCCH

- ❑ A medical summary is prepared including their prior cancer, therapy, complications and potential future problems..
- ❑ The patient's knowledge of their prior health and future health risks are assessed.
- ❑ A full examination of the patient is undertaken
- ❑ The patient is then counseled regarding their potential for any increased health problems and asked to consent to future contact.
- ❑ Appropriated surveillance tests are undertaken
- ❑ Follow up recommendations are made and the summary is provided to the patient and family doctor.
- ❑ If consented the patient is placed on letter follow-up.

Call back programme

- Past patients were not always informed.
- Knowledge of late effects incomplete at the time.
- Implemented a counselling programme utilizing a nurse clinician (Marion Nelson).
- Opportunity for a clinic visit or counselled by telephone.

Information transition

- Publication in December issue of BCMJ
The Need for Long Term Follow-up of Childhood Cancer Survivors in British Columbia. L. MacDonald, C. Fryer, M. L. McBride, P. C. Rogers, S. Pritchard.
- Develop treatment related guidelines for future surveillance that offer an early intervention.

Follow up recommendations

Patient unlikely to have significant health risks

- Patient should be followed by their family doctor/pediatrician
- A follow up letter is sent by BC's Children's Hospital (BCCH) annually to the patient and the family doctor
- Data is collated by the surveillance programme at BCCH

Follow up recommendations

At increased risk for health problems but none currently present

- Can be followed by their family doctor/pediatrician +/- Family Practice Oncologist
- Recommendations regarding surveillance monitoring and frequency individualised
- Results to be sent to surveillance program at BCCH
- Annual reminder sent to patient and Family doctor

Follow up recommendations

Already have significant health problems

- Require follow up by Pediatrician/ Family Practice Oncologist +/- specialists
- Require return visits to surveillance programme currently at BCCA
- Plan opening similar clinics in Victoria, Surrey, Kelowna, Kamloops, Prince George.

The When: Letting go

