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presentatie

preseerstræting

presentædie

preesentadie



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Story

Boodschappenlijstje

- Prosekko
- Rucolla
- Witte wijn
- Biefstuk
- Haricots-vers
- Ijs
- Koffie
- Martini
- Tomatensoep
- Garnalen
- Kippensoep
- Patat
- Champions
- Rode wijs
- Pannenkoeken
- Chocolade
- Olijven
- Poffertjes





Media



Head Injury Rules in Children

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PREDICT Paediatric Research in Emergency
Departments International Collaborative

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Head Injury Rules in Children

Franz E. Babl

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CT or no CT

- 14 year old boy, playing footy on Sunday afternoon
- Collided with other player
- Brief loss of consciousness
Then vomited x2
Brought in by ambulance



- Now GCS 15, amnesia, complains of headache, further vomit x2; neurological examination normal
- Does he need a CT scan of the head?

14yo footballer

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14yo footballer

Collision with another player
Brief LOC
2x vomit
GCS 15, headache, vomit x2
Normal neuro exam

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Would you CT?

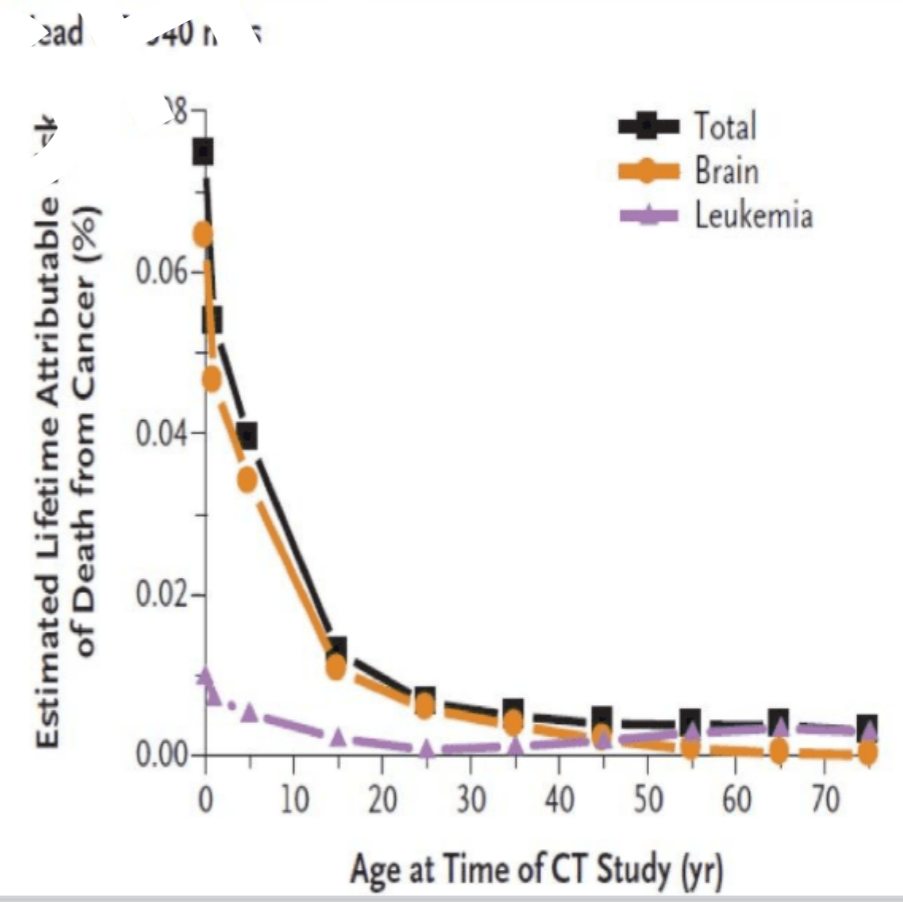
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CT or no CT

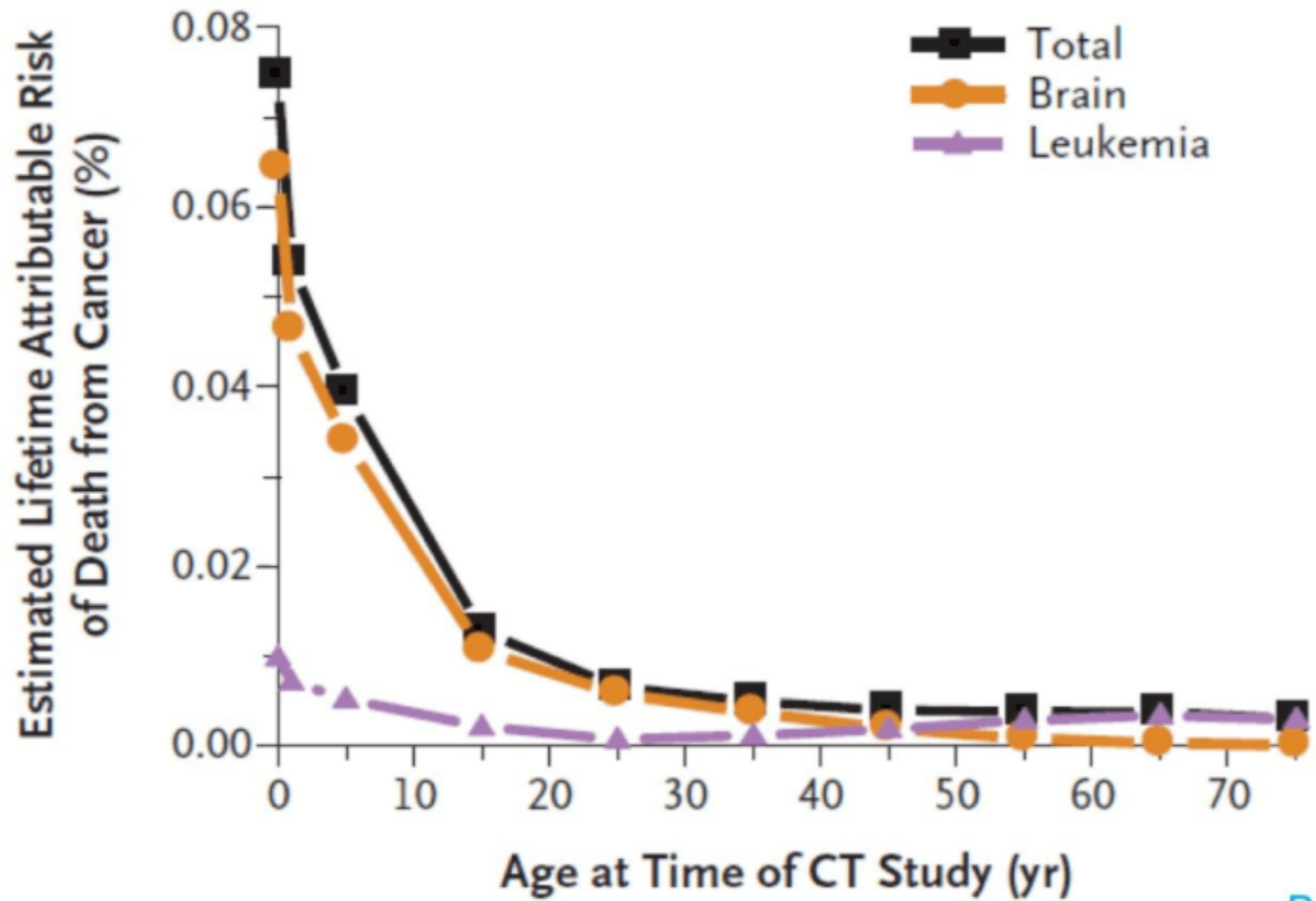
- 3,000 head injuries per year in 87,000 presentations
- CT current gold standard
 - Obvious for severe injury
 - Problematic for milder head injuries
- Radiation risk, need for sedation, resources

Brenner et al. JAMA 2007

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C Head CT, 340 mAs



Brenner NEJM 2007

Accuracy of PECARN, CATCH, and CHALICE head injury decision rules in children: a prospective cohort study

Franz E Babl, Meredith L Borland, Natalie Phillips, Amit Kochar, Sarah Dalton, Mary McCaskill, John A Cheek, Yuri Gilhotra, Jeremy Furyk, Jocelyn Neutze, Mark D Lyttle, Silvia Bressan, Susan Donath, Charlotte Molesworth, Kim Jachno, Brenton Ward, Amanda Williams, Amy Baylis, Louise Crowe, Ed Oakley, Stuart R Dalziel, for the Paediatric Research in Emergency Departments International Collaborative (PREDICT)

www.thelancet.com Published online April 11, 2017

Rules in comparison cohort (GCS 13-15, using clinically important TBI as outcome)

	PECARN	CATCH	CHALICE
Comparison Cohort			
Clinically important traumatic head injury			
Positive on criteria			
With outcome (n)			
Without outcome (n)			
Negative on criteria			
With outcome (n)			
Without outcome (n)			
Sensitivity (95% CI)			(87.3-96.1)
Specificity (95% CI)			(78.0-79.2)
PPV (95% CI)			(3.0-4.2)
NPV (95% CI)			(99.9-100.0)
	PECARN <2	100%/59%	0
	PECARN ≥2	99%/52%	1
	CATCH	92%/70%	13
	CHALICE	93%/79%	12

APHIRST

[Bablet al, 2017]

	Sensitivity/Specificity	Missed
PECARN < 2 yo	100%/59%	0
PECARN \geq 2 yo	99%/52%	1
CATCH	92%/40%	13
CHALICE	93%/79%	12

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Implementation of PECARN



Implementation of PECARN in Boston, US

- Setting with higher CT rate 21% (pre)
→ absolute reduction of 6%, 6% in CT rate
- No readmission in 72 h of discharged patients

Nigrovic Pediatrics 2015

Implementation of PECARN in Padua, Italy

- Setting with lower CT rate 7.3% (pre) → 8.4% (post)
- No missed patients

Bressan Acad Emerg Med 2012

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Implementation of PECARN



Boston, US

[Nigrovic Paediatrics 2015]

CT rate 21% (pre)
→ 15% (post)



Padua, Italy

[Breslin Acad Emerg Med 2012]

CT rate 7.3% (pre)
→ 8.4% (post)

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Performance



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