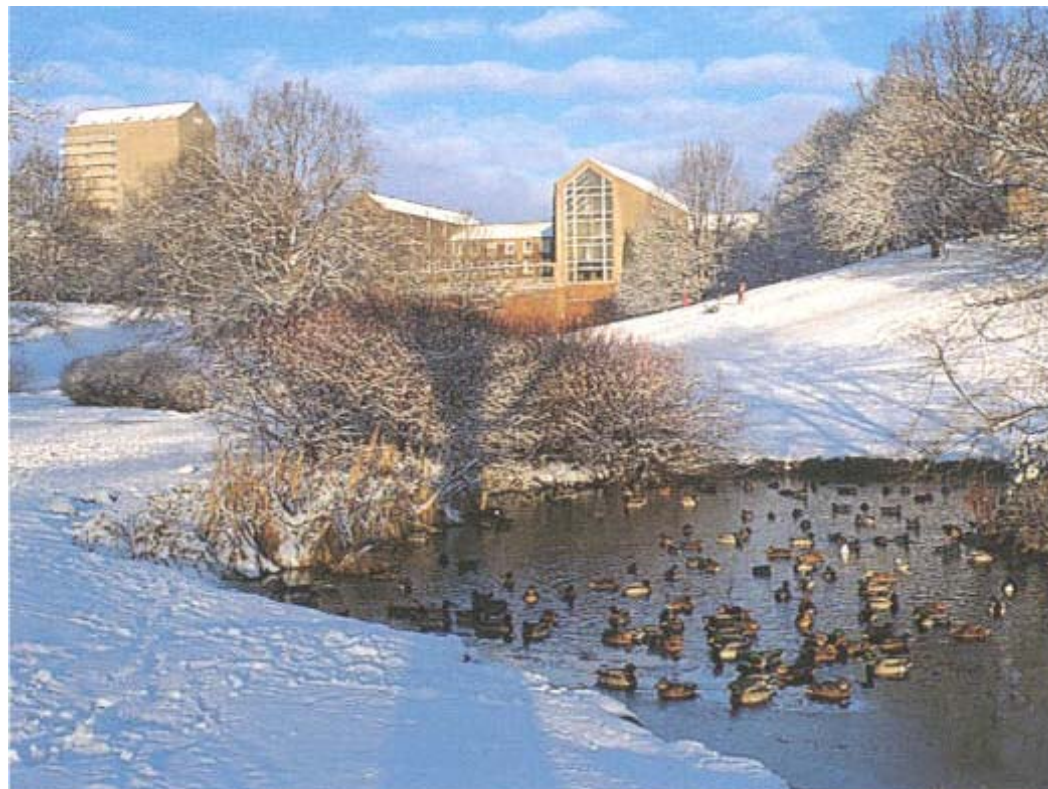


Frede Olesen,  
Praktiserende læge, professor, dr. med  
Forskningsenheden for Almen Praksis  
Aarhus Universitet



# Om kræft

- Livstidsrisiko for kræft er 35%
- 28% af alle dødsfald i Danmark
- I 2020 vil antallet af nye kræfttilfælde været øget med 20%
- Mindst 80% diagnosticeres via almen praksis
- 90% præsenterer symptomer
- Historisk: Besynderlig mangel på lyst til at få dybere indsigt i emnet.

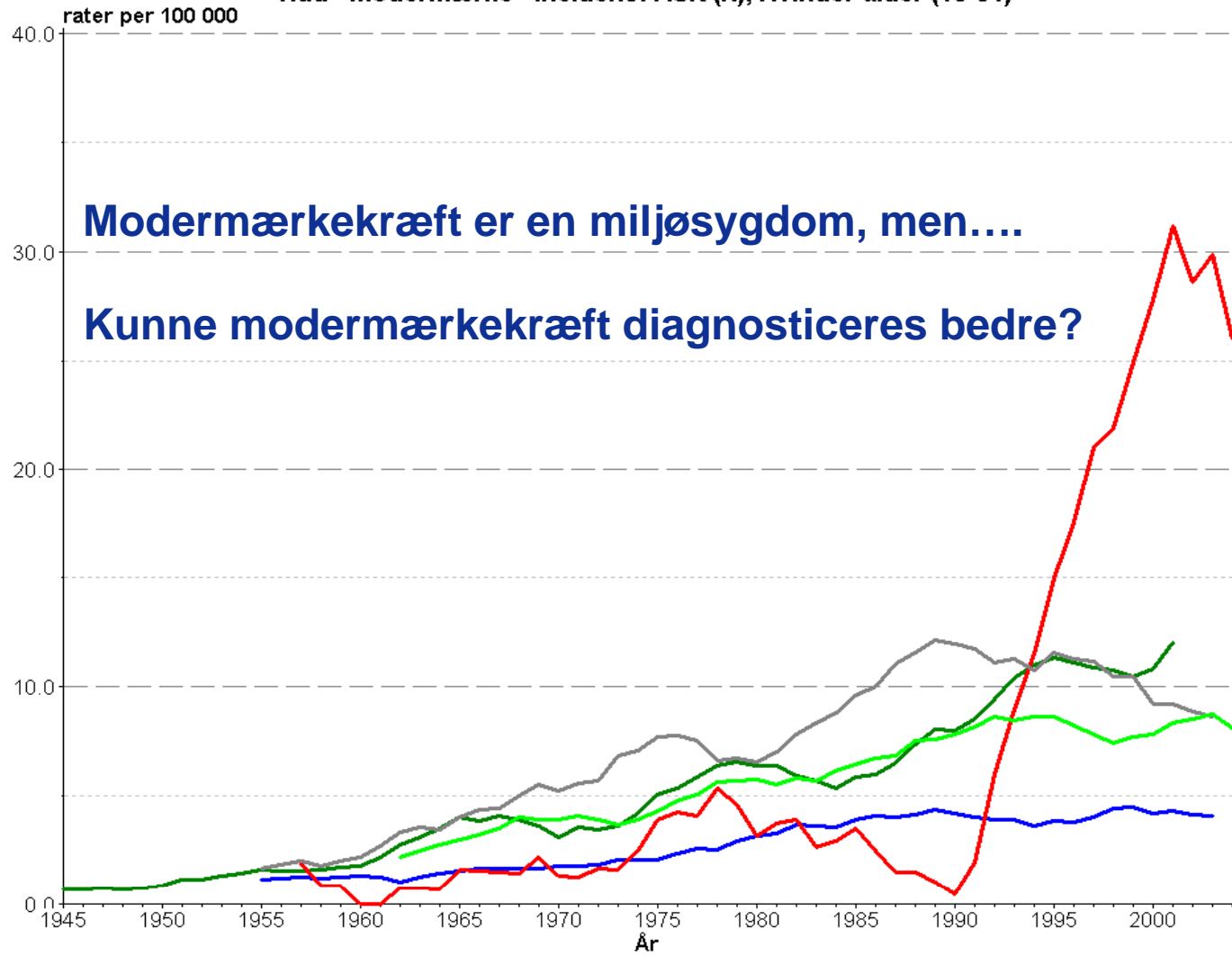
# Danmark har et problem!

1-year relative survival

Country	Lip	Tongue	Salivary glands	Oral cavity	Oropharynx	Nasopharynx	Hypopharynx	Oesophagus	Stomach	Small intestine	Colon	Rectum	Liver	Biliary tract	Pancreas	Nasal cavities	Larynx	Lung	Pleura	Bone	Soft tissue	Melanoma of skin	Breast	Ovary/uteri	Corpus uteri	Ovary	Vagina and vulva	Prostate	Testis	Penis	Bladder	Kidney	Choroid melanoma	Brain	Thyroid gland	Non-Hodgkin lymphoma	Hodgkin disease	Multiple myeloma	Acute lymphatic leukaemia	Chronic lymphatic leukaemia	Acute myeloid leukaemia	Chronic myeloid leukaemia
Switzerland	98.4	80.9	87.2	76.8	89.9	84.7	64.8	44.2	54.2	73.2	79.7	94.7	35.2	39.6	25.4	84.0	86.6	39.5	40.3	81.1	78.3	97.9	95.6	89.2	91.7	72.6	85.0	97.1	98.8	91.8	85.4	73.8	96.7	43.9	89.4	77.8	89.8	76.8	60.7	91.0	34.8	80.8
France	98.9	75.4	82.8	73.6	67.3	78.5	83.3	43.1	50.6	70.1	78.8	83.3	35.5	44.5	24.8	78.1	81.7	42.2	37.2	82.2	84.3	96.4	96.0	87.7	89.3	70.4	76.1	95.2	93.5	86.2	83.1	79.2	96.4	45.7	91.2	71.6	91.4	80.0	67.7	94.3	37.2	83.3
Sweden	98.6	73.3	87.8	79.3	75.5	92.5	52.6	36.0	44.9	71.2	79.7	83.7	24.3	29.1	19.2	78.7	90.4	36.8	42.7	84.0	83.3	96.2	96.6	86.7	84.7	78.8	79.3	96.0	94.3	84.8	88.0	73.7	96.3	45.5	88.0	75.1	92.0	80.3	66.2	94.4	42.7	76.5
Belgium	94.1	74.6	81.0	70.6	67.8	88.0	62.3	44.1	54.2	71.4	76.5	83.7	32.8	50.3	28.3	75.9	84.5	41.1	39.2	75.9	83.3	93.1	93.1	86.8	86.5	71.9	83.4	94.3	94.1	92.2	86.5	76.6	100.3	46.8	86.2	75.0	91.6	78.9	68.2	87.3	45.4	69.5
Italy	98.5	78.4	80.6	76.7	68.9	82.2	67.8	38.3	55.1	68.0	78.1	80.3	38.6	36.1	23.5	78.5	89.3	40.0	44.7	77.2	82.5	96.3	95.8	87.8	90.8	68.3	81.4	94.3	94.7	88.9	90.3	79.0	98.6	46.2	90.7	74.6	91.6	78.6	58.5	90.2	33.7	73.6
Netherlands	101.0	74.9	89.4	79.7	75.8	71.9	62.6	37.0	41.2	62.9	76.0	79.9	23.9	37.1	17.3	77.5	92.2	38.2	38.3	85.2	80.0	97.6	95.7	85.2	89.6	66.7	87.1	95.9	95.8	95.2	85.5	68.1	102.0	40.4	83.4	71.7	91.8	73.1	67.7	93.0	36.4	77.8
Finland	98.8	76.9	85.7	78.8	68.2	76.2	55.7	34.5	48.4	68.8	77.5	81.0	22.8	33.8	19.6	77.8	86.7	86.7	39.7	81.5	84.1	95.4	95.7	86.0	91.8	79.1	76.8	95.4	90.6	87.4	89.5	74.6	48.3	90.1	70.7	92.6	74.8	79.0	90.2	39.8	73.1	
Iceland			92.3	83.6			35.4	43.2			79.7	76.0	19.9			23.1	88.0	85.3	36.8		87.3	86.1	97.4	85.8	90.3	67.8	94.8	94.1			86.7	71.1		44.5	96.7	82.9		73.1			49.0	
Germany	101.9	81.1	78.2	78.1	68.2	73.8	59.8	40.3	48.8	83.6	76.9	81.2	26.5	34.5	24.0	66.4	87.2	35.0	34.2	72.4	82.9	95.8	92.9	86.4	91.6	65.4	87.3	94.7	93.2	95.1	89.1	79.7	98.2	44.2	84.5	74.4	90.2	69.0	64.0	88.0	33.2	72.4
Norway	99.9	70.1	84.5	78.8	68.0	83.2	52.6	30.8	43.2	84.9	77.1	62.2	19.7	32.8	16.3	83.7	82.3	32.3	32.3	78.1	82.8	97.8	95.8	85.6	91.2	71.6	83.4	94.7	97.1	92.7	87.7	87.9	97.2	47.6	88.9	73.7	91.3	76.8	65.9	92.7	31.3	75.1
Spain	100.9	72.2	84.0	74.7	62.9	72.3	83.4	35.7	48.4	60.6	74.7	78.1	32.6	33.6	19.4	79.5	84.7	34.2	28.9	78.9	81.9	97.0	95.4	85.9	89.2	64.4	76.6	92.2	96.1	89.0	87.4	72.3	91.7	36.7	87.8	69.8	89.5	74.6	64.2	92.2	32.1	74.6
Europe	97.8	71.4	80.9	74.0	68.4	76.9	80.1	35.8	46.3	84.3	74.2	78.7	30.0	35.9	20.9	76.8	84.7	36.0	37.8	77.0	80.4	95.0	93.8	84.4	89.5	86.7	79.2	92.7	93.3	86.8	86.4	73.8	92.3	42.7	87.6	71.8	90.4	72.3	58.3	88.2	34.0	89.9
Austria	98.7	67.8	83.6	68.0	70.0	76.7	58.4	34.8	50.0	67.5	75.7	79.6	25.0	37.5	23.3	76.4	83.7	37.4	40.7	77.6	79.1	91.6	92.4	83.4	89.2	75.5	90.3	83.8	86.3	88.6	79.7	81.2	44.1	89.3	70.4	86.7	65.8	53.3	79.4	31.6	59.2	
UK Wales	100.8	71.5	82.9	75.7	61.2	72.5	47.8	33.5	39.0	61.1	72.2	77.4	26.1	38.9	18.0	77.3	83.0	28.2	29.6	73.2	76.4	90.2	92.1	77.6	91.7	60.7	77.2	89.0	93.3	87.9	86.4	64.9	92.4	41.3	89.5	69.2	89.6	71.0	52.4	89.7	37.2	72.9
UK Scotland	99.0	70.7	77.6	75.5	65.9	70.0	56.3	33.3	38.0	63.0	72.1	76.3	21.7	39.1	16.5	74.6	82.9	28.4	32.5	78.7	77.5	87.1	91.7	80.8	86.9	61.2	82.6	91.3	91.7	82.8	80.0	62.0	95.0	39.4	80.5	68.4	89.3	71.4	59.9	92.9	31.4	76.3
Malta	95.9	66.9	77.8	80.4	82.9		23.8	33.8	54.8	71.5	77.3	17.5	49.5	11.5		87.1	27.9		59.2	78.0	94.6	93.1	93.0	85.4	52.6	79.6	83.0	99.3	67.5	87.7	68.8	34.2	87.4	66.7	92.8	73.6	82.1	26.1	84.0			
Portugal	86.1	64.6	79.2	70.0	55.8	79.5	48.7	33.9	48.8	59.2	74.2	76.6	31.2	42.8	24.8	77.9	78.0	35.7	32.3	68.5	80.0	93.8	92.6	81.5	83.4	66.3	77.8	92.7	93.4	91.6	82.2	75.4	81.4	44.5	91.7	70.7	89.0	84.1	50.5	86.3	34.8	69.6
UK England	98.1	72.7	81.3	75.6	66.6	71.9	53.1	32.9	38.0	57.8	69.9	76.3	23.7	37.7	16.2	73.5	83.7	26.9	31.8	73.2	78.6	96.0	91.8	80.6	87.9	69.9	81.0	90.2	93.7	87.2	84.7	62.7	97.9	37.1	83.7	69.4	89.7	67.1	66.4	86.4	34.5	69.4
Slovenia	97.8	72.9	83.7	73.4	54.1	80.8	56.0	22.8	39.8	55.8	66.1	71.2	25.6	26.6	13.0	65.8	84.1	31.6	26.6	83.5	88.7	93.9	92.3	84.4	88.9	67.9	76.8	87.0	78.3	82.1	78.0	72.8	98.4	39.2	87.1	74.1	91.4	70.4	47.7	86.6	25.2	66.3
UK Northern Ireland	97.3	68.4	82.6	78.4	64.8	66.4	56.9	35.6	45.6	63.4	73.9	88.5	28.8	38.8	13.3	81.3	85.0	28.3	28.4	83.6	85.4	95.6	98.7	78.6	86.1	69.6	86.3	86.4	89.8	84.3	76.4	88.6	38.4	84.4	66.3	86.7	66.3	66.3	88.1	28.1	66.3	
<b>Denmark</b>	99.9	66.1	81.1	73.6	68.9	78.5	58.0	27.5	36.5	50.1	70.9	76.0	13.6	28.9	14.2	85.6	81.7	27.1	39.3	76.3	81.1	96.1	93.4	84.5	90.0	63.9	76.8	86.0	93.7	84.2	84.0	65.0		41.9	84.4	70.9	88.4	69.6	60.3	91.5	33.6	63.3
Ireland	83.6	62.4	73.8	72.3	54.9	73.5	53.2	32.7	34.2	57.6	71.6	73.9	20.3	37.9	14.9	66.9	79.8	26.5	22.3	69.9	79.5	96.4	91.4	81.4	86.4	57.6	83.8	91.0	86.1	81.2	83.9	64.2	89.1	37.1	80.3	66.1	85.7	62.8	61.2	92.0	34.5	65.5
Czech Republic	98.0	55.0	78.0	67.1	63.3	70.0	69.4	26.1	39.2	65.1	66.5	69.5	17.9	27.0	18.1		79.0	35.1	24.2	53.3	79.7	93.6	90.8	81.1	89.2	66.9	75.5	87.0	82.4	72.7	85.0	73.8	69.3	42.2	78.4	71.5	89.2	62.6	43.9	81.1	28.5	66.8
Poland	88.2	60.1	83.0	69.2	55.8	81.0	55.2	23.2	33.3	45.5	60.1	70.4	32.1	23.4	17.9	79.8	75.0	32.0	33.4	69.7	76.3	89.2	90.7	79.1	88.3	60.8	58.2	84.4	89.1	67.5	76.6	68.3		42.1	84.7	88.8	89.7	59.7	56.6	78.6	22.1	48.9

Møller H et al. British Journal of Cancer. 2009;101, S110-4

### Hud - modermærke - Incidens: ASR (N), Kvinder alder (15-34)



- Danmark
- Finland
- Island
- Norge
- Sverige

NORDCAN

# Symptomet er henvendelsesårsagen

- Hvilke symptomer er der i befolkningen
  - Spændende epidemiologisk forskning I Odense og Århus
- Hvilke symptomer betinger lægebesøg
  - Tæt samarbejde med UK centre om prædiktive værdier
    - CaPri netværk
  - Hvilke psykologiske faktorer influerer på beslutning
    - Unge har flere symptomer og synes de er alvorligere!
    - Psykologiske prædiktorer for lægesøgningsadfærd
      - Situation eller personlighedstræk
  - Omgivelsesfaktorerers indflydelse på lægesøgning
    - Kultur, interaktion, kontekst, netværk
- **Mål: lære læger om risikofaktorer – lave interventioner**

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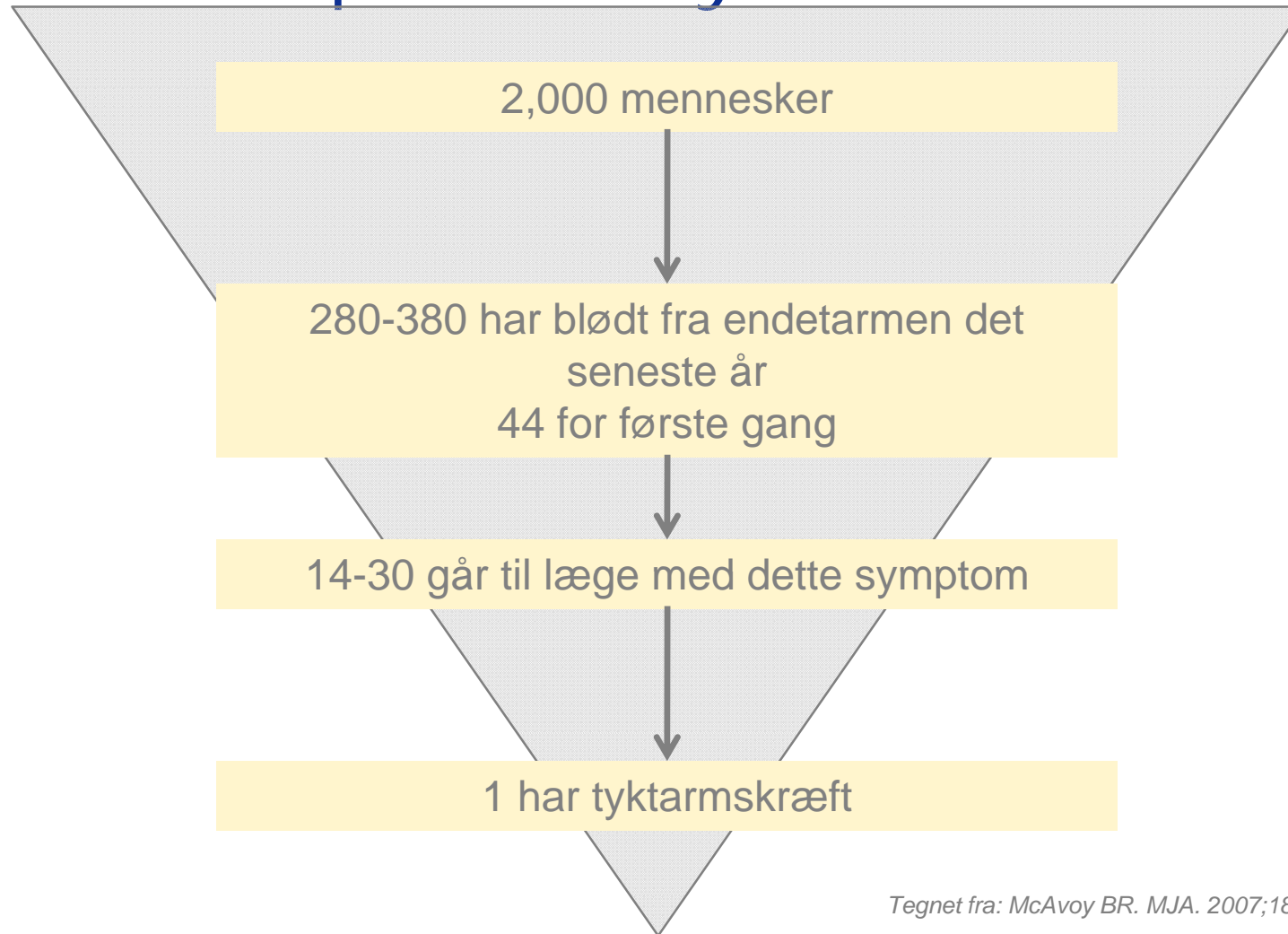
## Sandsynligheden for, at et symptom hos en kvinde i alderen 20-44 år fører til lægekontakt

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Symptom	Andel der fører til lægekontakt
Træthed	1:456
Hovedpine	1:184
Fordøjelsesbesvær	1:109
Rygsmarter	1:52
Smerter i benene	1:49
Psykiske problemer	1:46
Mavesmerter	1:29
Menstruationsforstyrrelser	1:20
Ondt i halsen	1:18
Brystsmerter	1:14

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# Symptomer på kræft – Eksempel med tyktarmskræft



Tegnet fra: McAvoy BR. MJA. 2007;187:115-7

# Fra symptom til diagnose

- En drøm:
  - Et forskningsinitiativ som i mange år ville arbejde med dette.
  - Fordi...
    - Mindst 25 % forbliver uforklarede (MUS)
    - De fleste er tegn på banale diagnoser
    - **½ - 5 % af de alvorlige symptomer er tegn cancer**

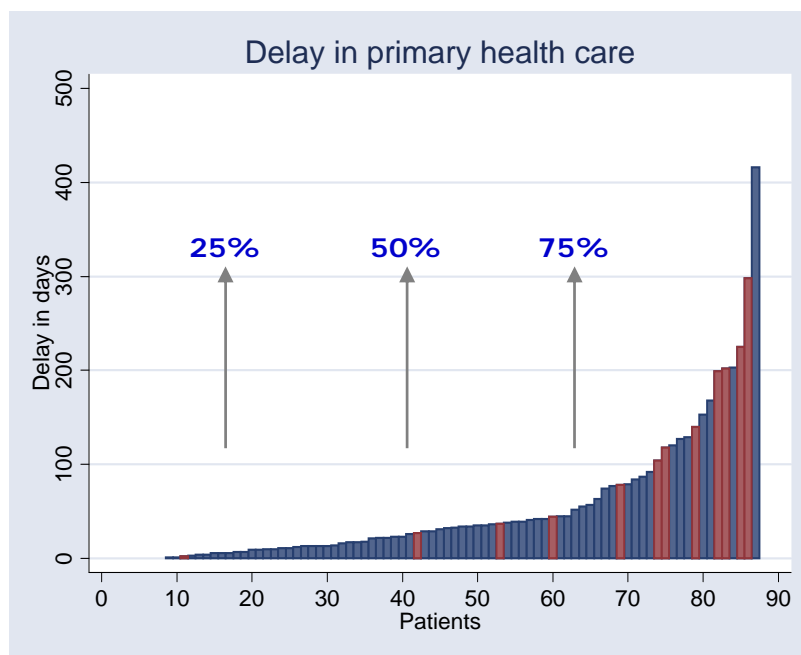
## Primærsektor

## Sekundærsektor

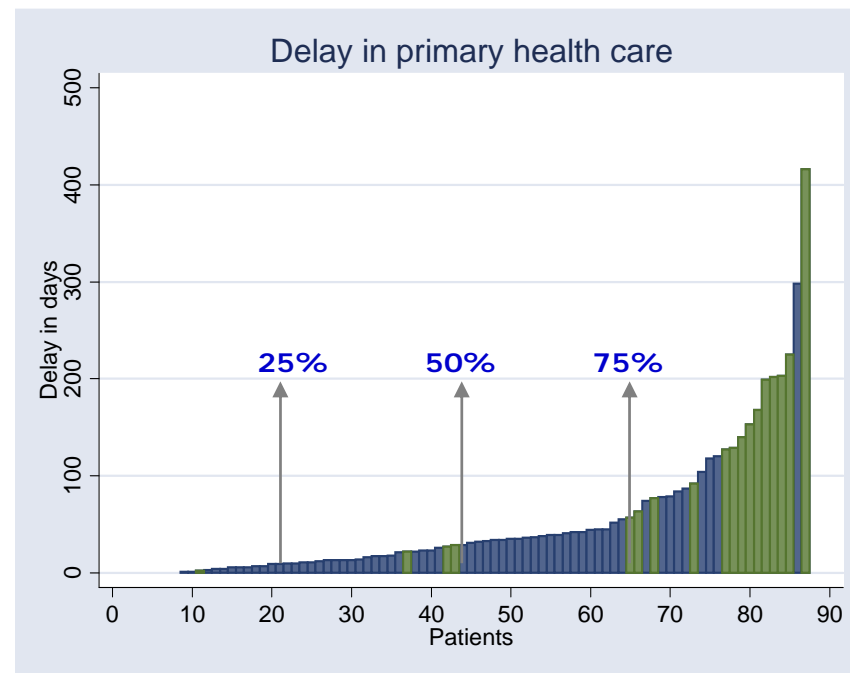


x i almen praksis → 200 rtg. lunger → 4 med mistanke → 1 med kræft

# Symptom til diagnose for lungekræft



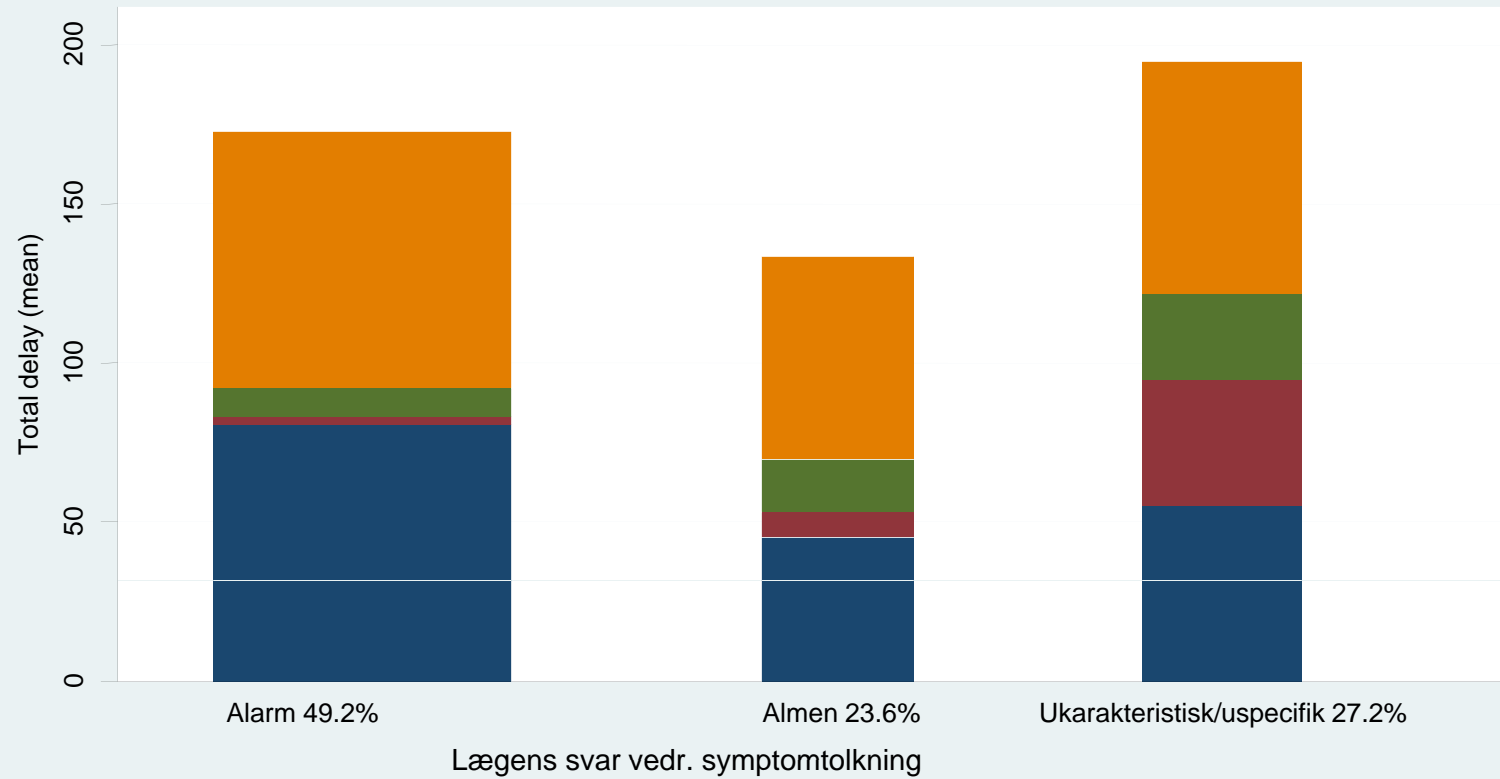
Atypiske sympt.



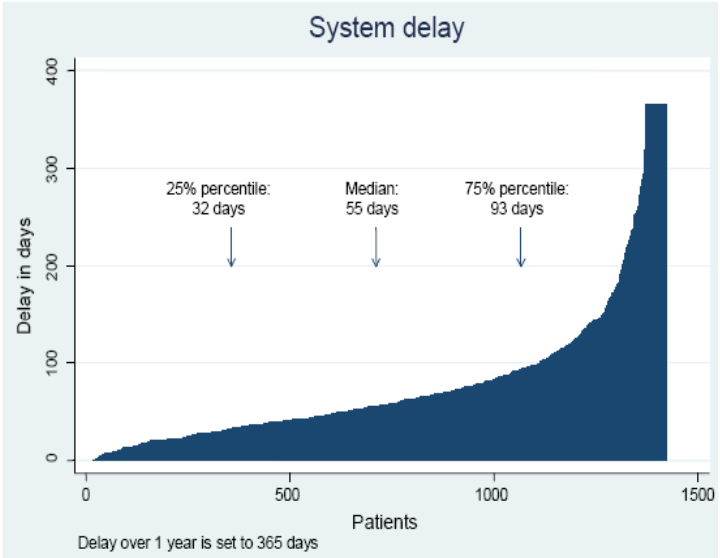
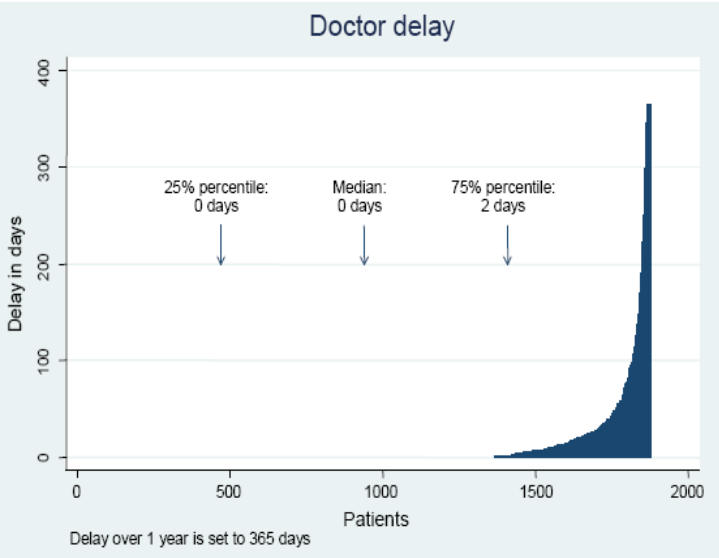
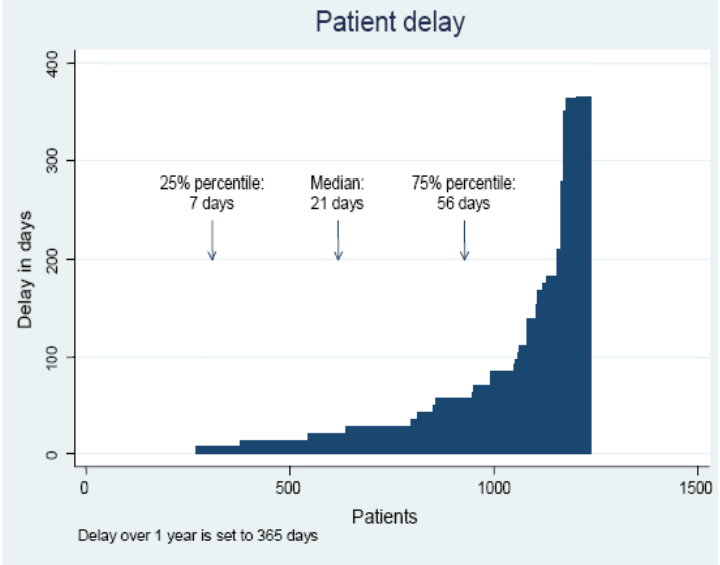
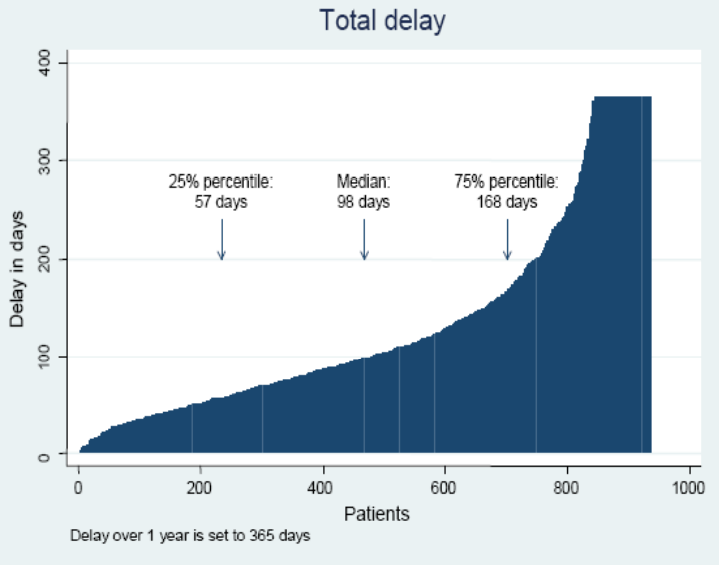
Falsk negativt røntgen



## Fordeling af patient-, læge- og system-delay



# Ventetidens sammensætning



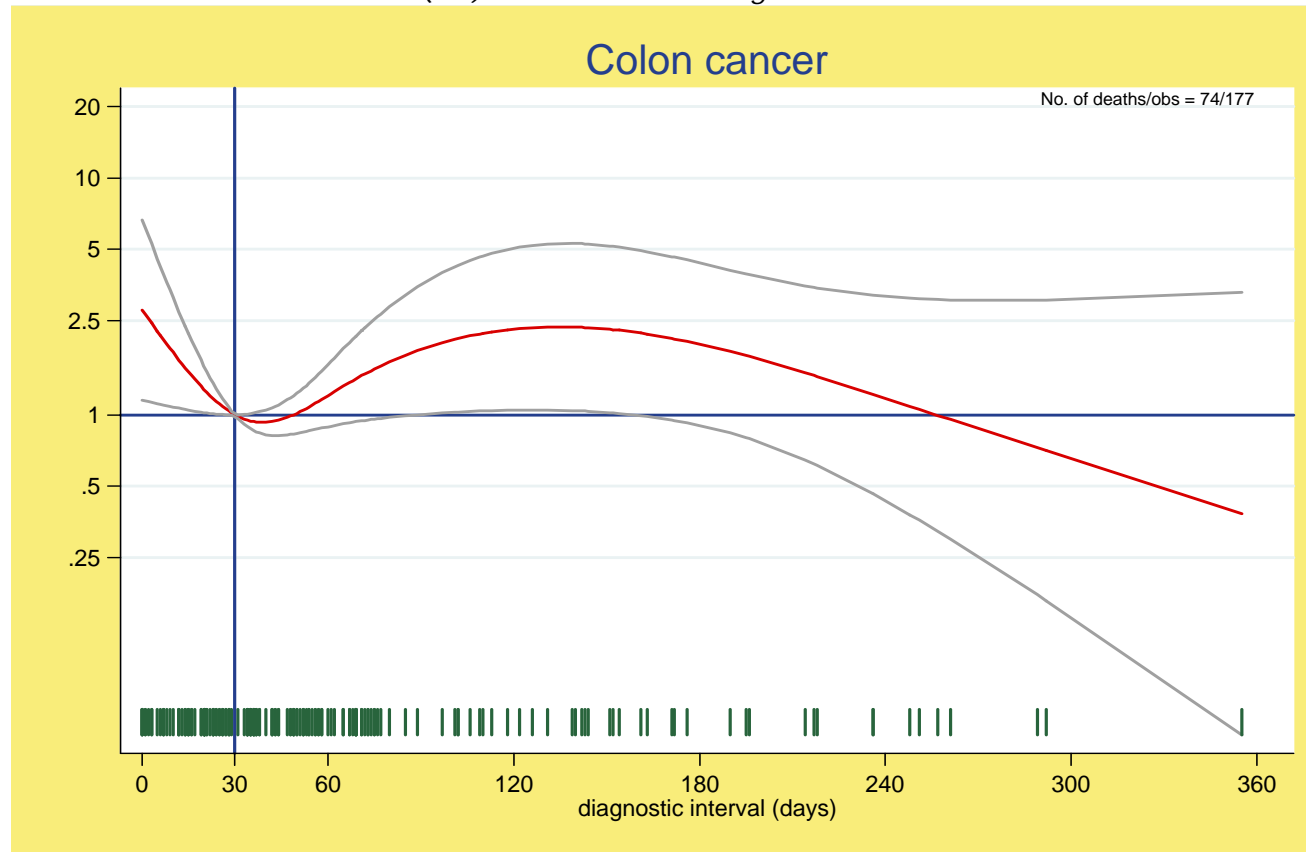
Hansen. Delay in the diagnosis of cancer [Thesis]. University of Aarhus, 2008.

# Tovholder og case manager

- Er tovholderen reelt tovholder?
- Hvilke krav er der for at få et godt forløb i sundhedsvæsenet?
- Kan den diagnostiske proces gøres bedre
  - Især for de ikke typiske
    - Produktudvikling sammen med billeddiagnostik ønskes
    - Kan biomarkører få en plads i primærdiagnostik

# Betyder det noget med lang ventetid?

Estimated hazard ratios (HR) as a function of diagnostic interval



- Red:** Estimated HRs as a function of diagnostic delay using restricted cubic splines, and adjusting for gender, age, and co-morbidity
- Grey:** 95% confidence intervals
- Blue:** Thirty days as reference HR=1
- Green:** Distribution of diagnostic interval (upper limit 365 days)

# "Almen praksis som gatekeeper"

- Princippet om en stærk almen praksis, herunder også gatekeeper og listep princip har betydelige og dokumenterede fordele!
- MEN er der bivirkninger?
  - Praksislægen "gidsel" i en rationering og ventelister
  - Svært at henvise, så indikationen strammes
  - Bivirkning ved relationen og normalisering
  - Fejlskøn

*Udvalgte kilder:*

*Starfield B et al. Contribution of primary care to health systems and health. Milbank Q 2005;83:457-502.*

*Walley J et al. Primary health care: making Alma-Ata a reality. Lancet 2008;372:1001-1007.*

*Starfield B. Is primary care essential? Lancet 1994;344:1129-1133.*

*Halm EA et al. Is gatekeeping better than traditional care? A survey of physicians' attitudes. JAMA 1997;278:1677-1681.*

*Freeman GK et al. Continuity of care: an essential element of modern general practice? Fam Pract 2003;20:623-627.*

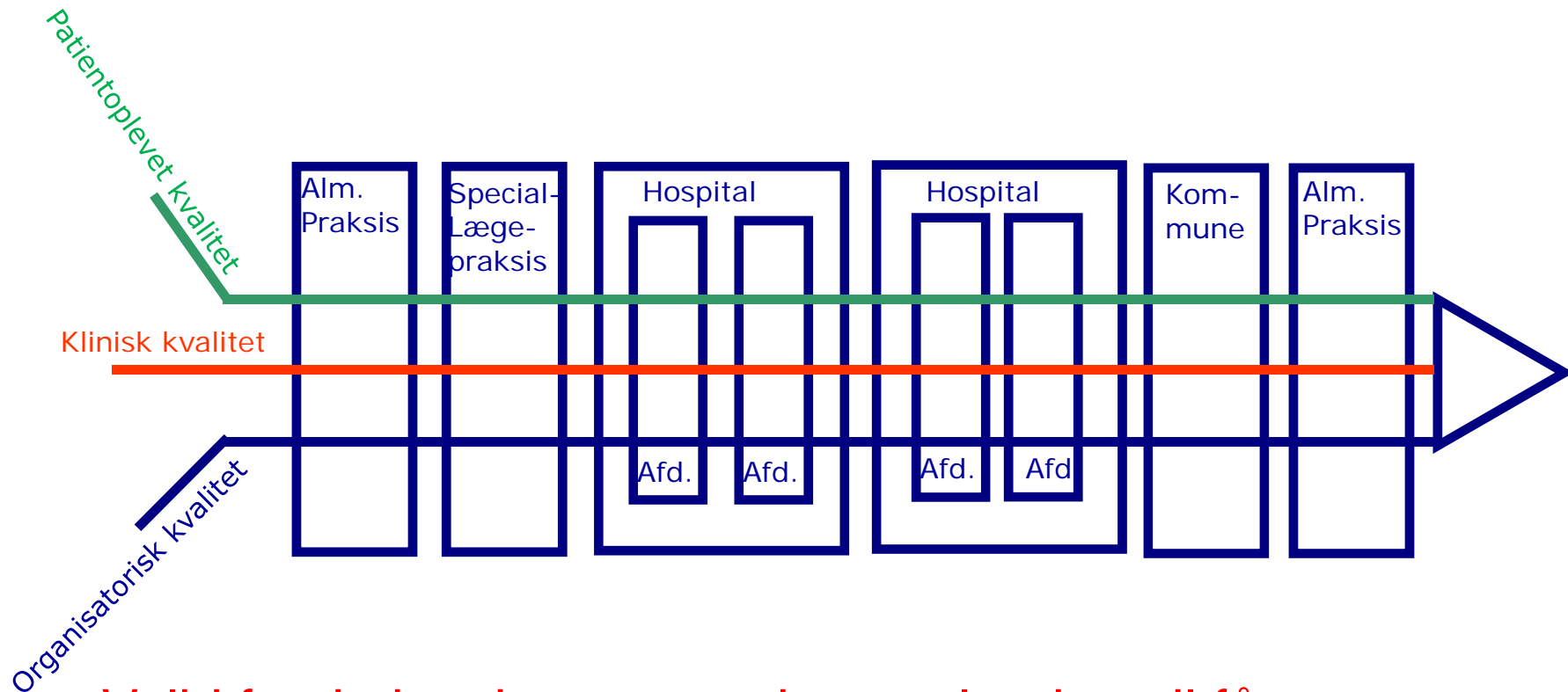
*Goodwin N. Diagnostic delays and referral management schemes: how "integrated" primary care might damage your health. Int J of Integrated Care 2008; 8*

# "Almen praksis som gatekeeper"

		Relative 1- års overlevelse (%)		
		Lande	Median	p-value
Gatekeeper	Nej	7	73.4	0,004
	Ja	12	67.8	
Listesystem	Nej	9	73.4	0.004
	Ja	10	66.3	
Første kontakt	Altid	10	66.3	0.001
	Nogle gange	7	73.4	
	Nej	2	73.4	

# Perspektiv på kvalitet i kræftforløbet

- brugeren er den, der også stemmer!  
- og dermed bestemmer?



Valid forskningsbaseret patientevaluering vil få større og større plads i fremtidens sundhedsvæsen

Drømmen: at bidrage til en hjertelignende succes  
- vort bidrag: bedre kvalitet, bedre oplevelse  
- 500 – 1000 færre cancerdødsfald per år??

**Aldersstandardiserede rater for mænd og kvinder pr. 100.000 indbyggere for udvalgte dødsårsager 1990-2005**

