

Esophagus and Gastric cancer

Epidemiology, pathology and oncologic treatment

Christian Kersten

Onkolog, dr.med.

GI-og forskningsansvarlig ved

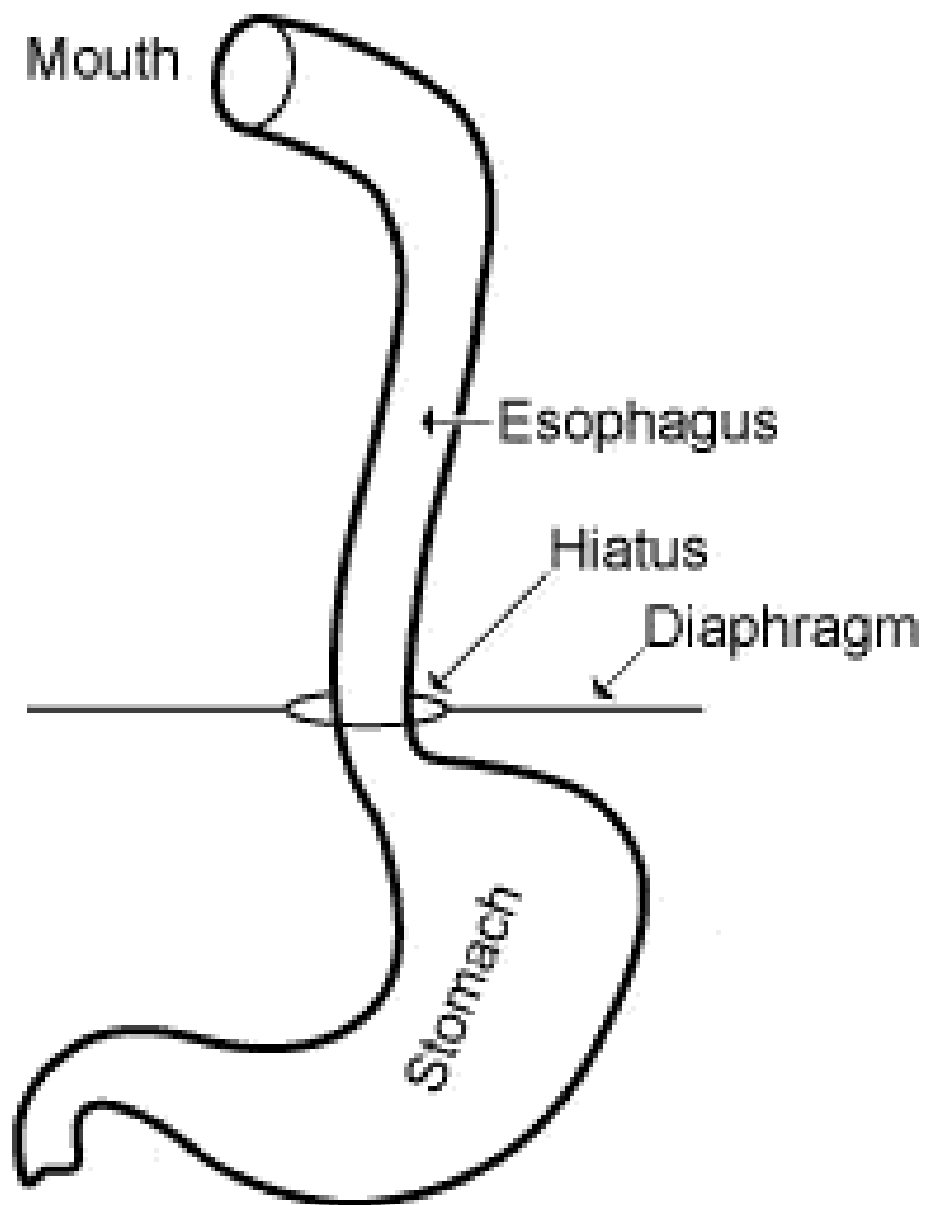
Senter for kreftbehandling i Kristiansand

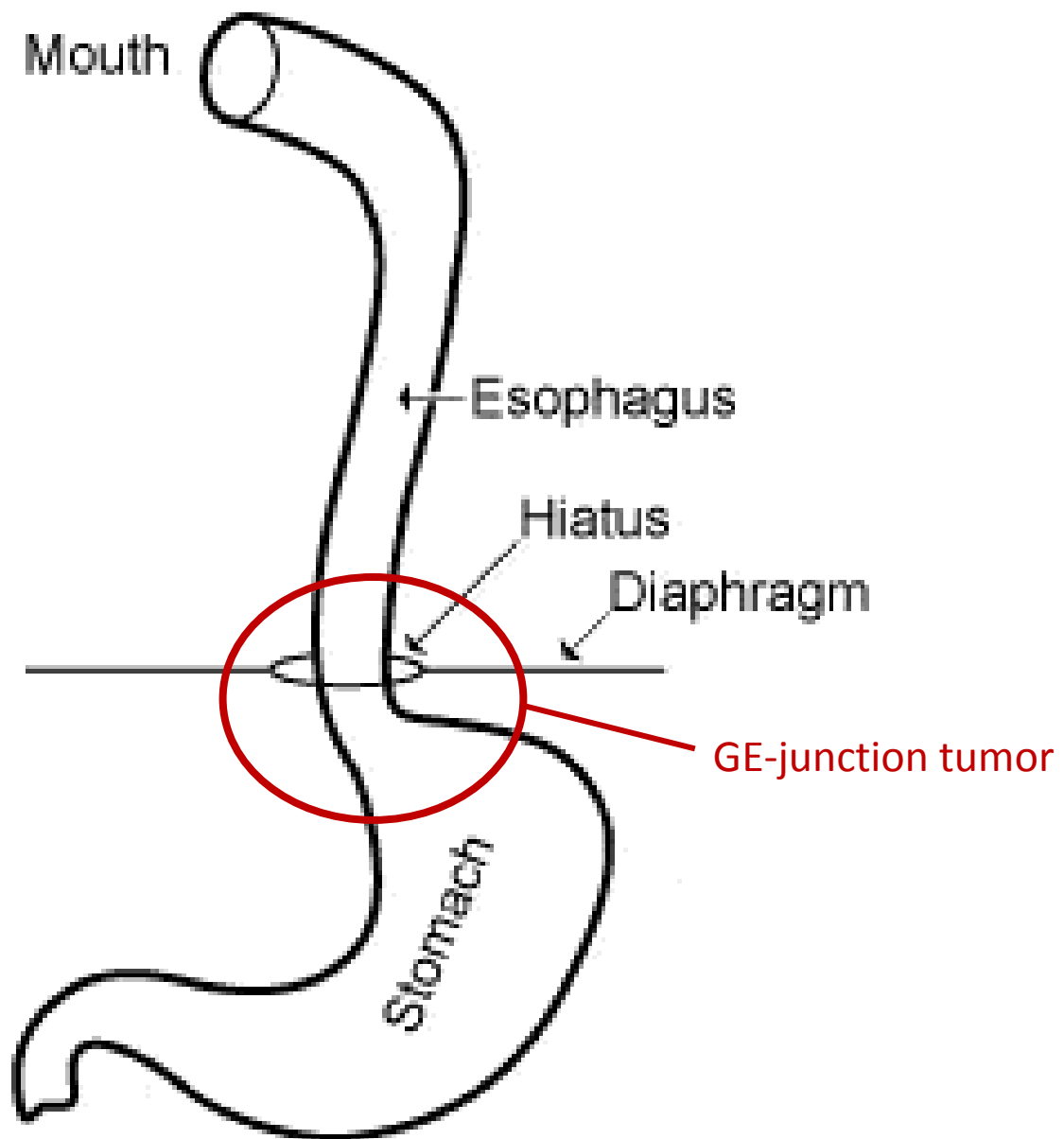
Esophagus and Gastric cancer

Epidemiology, pathology and oncologic treatment

”Make it easy.” (Rene)

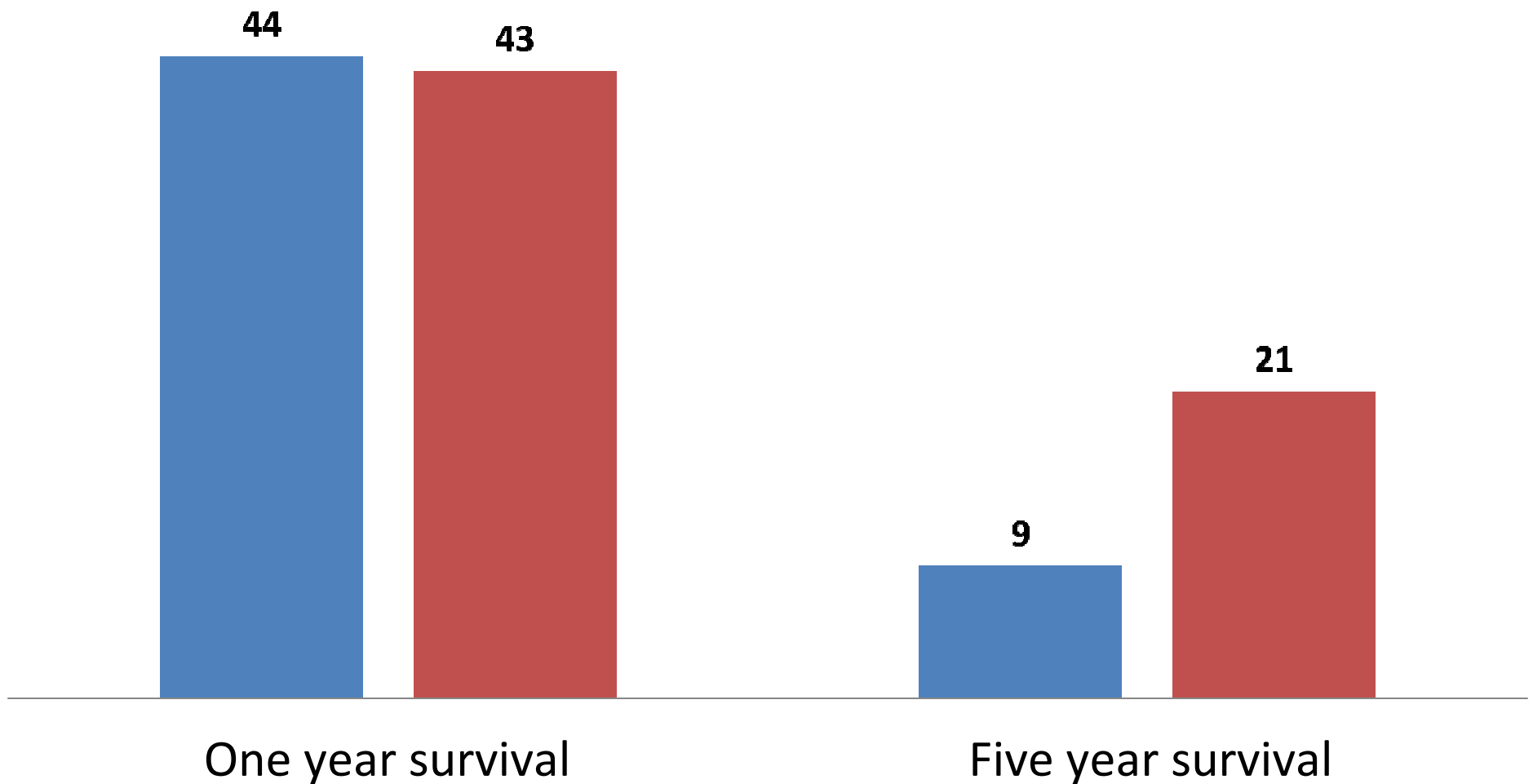
Christian Kersten
Onkolog, dr.med.
GI-og forskningsansvarlig ved
Senter for kreftbehandling i Kristiansand





Survival in Norway in % 2000-4

■ Esophagus ■ Gastric



Esophagus, *Esophagogastric* and Gastric cancer

Epidemiology, pathology, oncologic *and other palliative* treatments

"Make it easy." (Rene)

Christian Kersten
Onkolog, dr.med.
GI-og forskningsansvarlig ved
Senter for kreftbehandling i Kristiansand

Level of Evidence

- Handle with care!-



“There does not exist
a clearly superior treatment strategy,
and Qol is critical.”⁵

Curative	Histology	Etiology	Epi- demiology	Imaging	Oncology	Surgery
					BSC/Nutritional support	
Esophagus	squamous	smoking Alcohol ??	↓	PET Diagnostic Prognostic predictive	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine	+ _{T2N0} / - _{T3N1-2}
	adeno	obesity reflux Helicobacter ??	↑	PET	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine 3 EOX Surgery (3EOX)	+ / -
GE- junction	<u>adeno</u> -intestinal -diffuse -Her2	obesity reflux Helicobacter ??	↑	Endoscopic US PET	3 EOX Surgery (3EOX)	+
Gastric	<u>adeno</u> -intestinal -diffuse	obesity Helicobacter ??	↓	PET	3 EOX Surgery	+

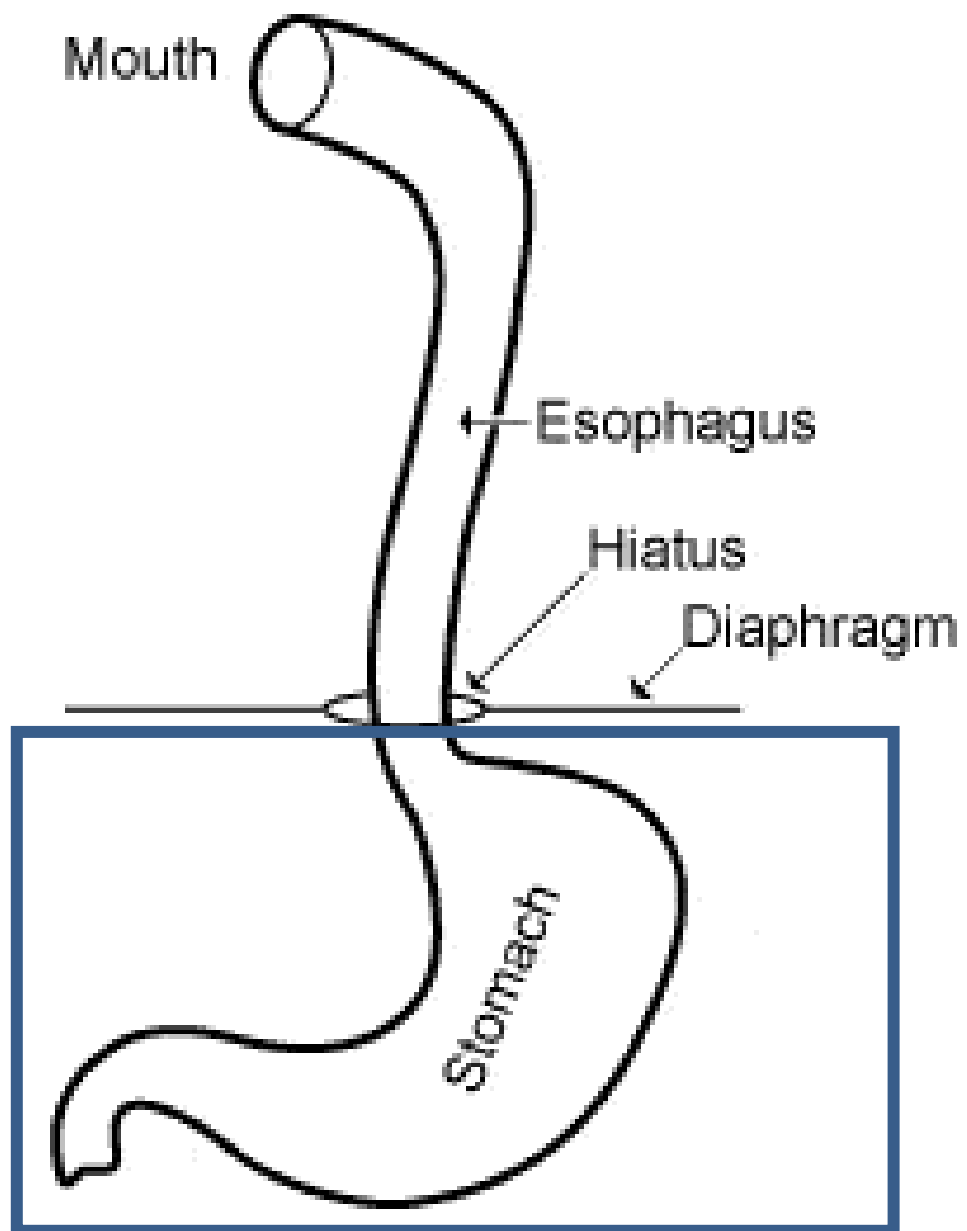
Palliative	Chemo 1.line	Chemo 2.line	Extern irradiation	Brachy-therapy	Stent	Surgery
	BSC/nutritional support					
Esophagus squamous	Taxanes CiFU EOX	EOX CiFU Taxanes	+	+	+	-
Esophagus adeno	EOX	Irinotecan/ Taxanes	+	+	+	-
GE-junction	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-
Gastric	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-

**Tegnforklaring til de neste to slidene,
som er en blanding av evidens, nasjonale anbefalinger og
personlig mening**

tegn	
+	Anbefalt
-	Ikke anbefalt
fargekode	
	Godt dokumentert
	Tja
	Ikke godt dokumentert

Curative	Histology	Etiology	Epi- demiology	Imaging	Oncology		Surgery
					BSC/Nutritional support		
Esophagus	squamous	smoking Alcohol ??	↓	PET Diagnostic Prognostic predictive	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine	+ _{T2N0} / - _{T3N1-2}	
	adeno	obesity reflux Helicobacter ??	↑	PET	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine 3 EOX Surgery (3EOX)	+ / -	
GE- junction	<u>adeno</u> -intestinal -diffuse -Her2	obesity reflux Helicobacter ??	↑	Endoscopic US PET	3 EOX Surgery (3EOX)	+	
Gastric	<u>adeno</u> -intestinal -diffuse	obesity Helicobacter ??	↓	PET	3 EOX Surgery	+	

Palliative	Chemo 1.line	Chemo 2.line	Extern irradiation	Brachy-therapy	Stent	Surgery
	BSC/nutritional support					
Esophagus squamous	Taxanes CiFU EOX	EOX CiFU Taxanes	+	+	+	-
Esophagus adeno	EOX	Irinotecan/ Taxanes	+	+	+	-
GE-junction	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-
Gastric	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-



Neoadjuvant/Adjuvant behandling ved operabel ventrikkeltumor

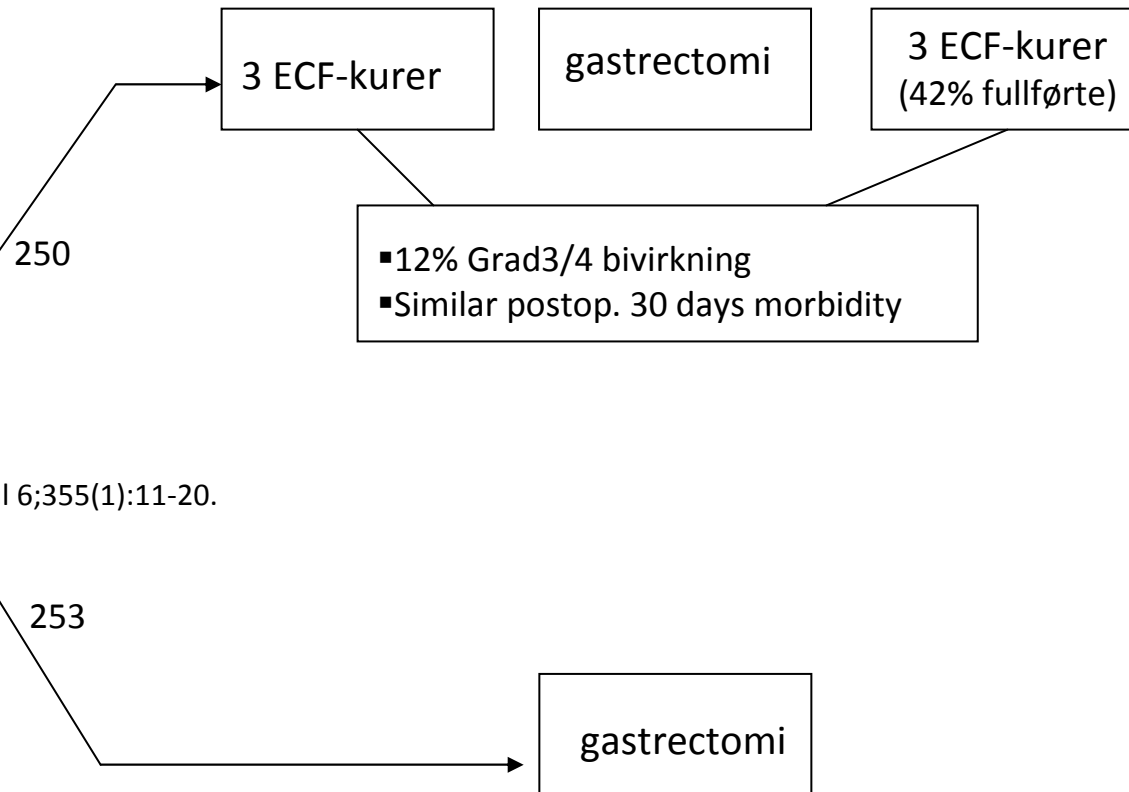
gastrectomi

Neoadjuvant/Adjuvant behandling ved operabel ventrikkeltumor

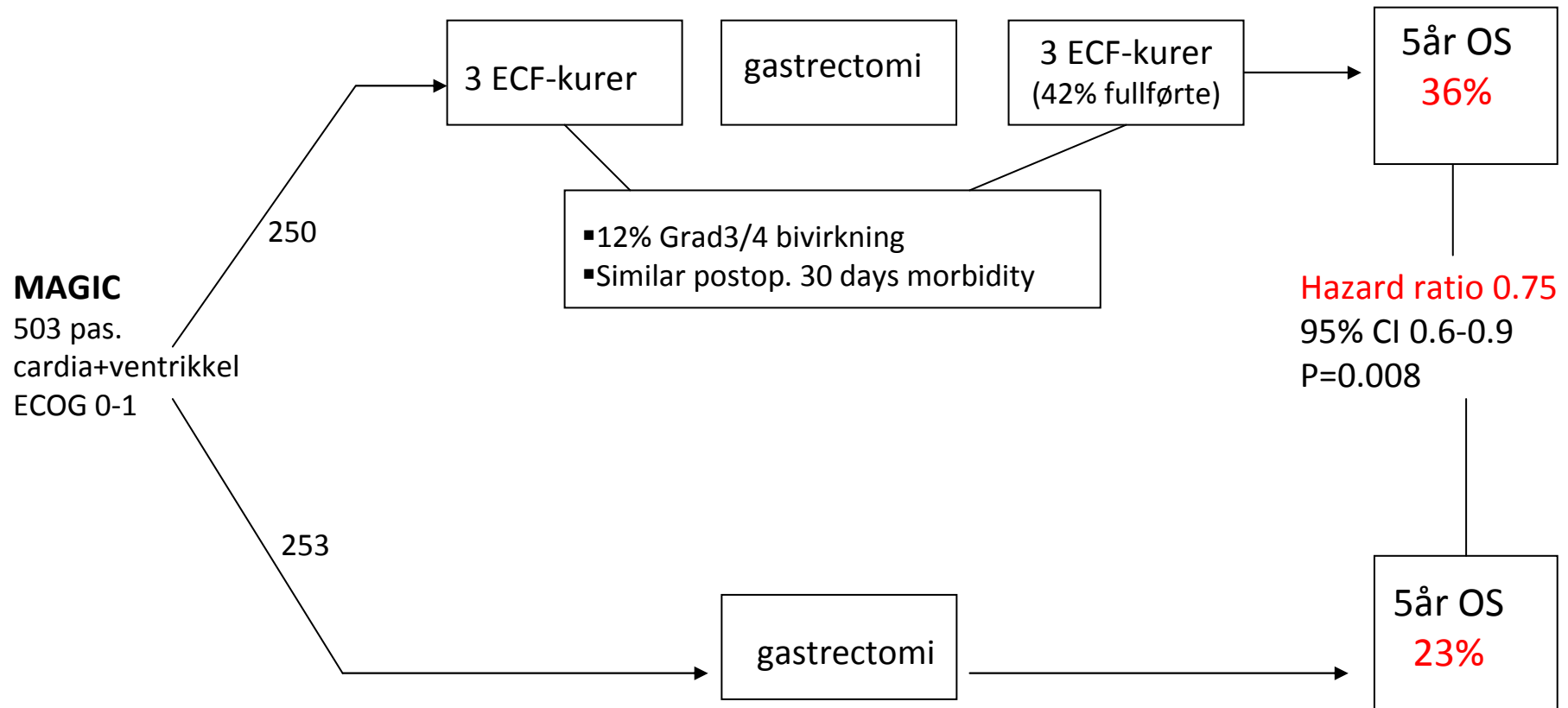
MAGIC

503 pas.
cardia+ventrikkeltumor
ECOG 0-1

N Engl J Med. 2006 Jul 6;355(1):11-20.



Neoadjuvant/Adjuvant behandling ved operabel ventrikkeltumor



Cunningham Det al.
N Engl J Med 2006;355:11-20.

NGICGs retningslinjer fra 28.11.06

- Ca. venticuli, ECOG 0-1, stad. II-IV, <75 år
- 3 kurer ECX før og etter op (3-6 uker mellom kur og op), evt. med G-CSF
- Senter for kreftbehandling/Kristiansand: EOX

Oxaliplatin mindre toksisk og lettere å gi poliklinisk enn Cisplatin.

REAL-studie: Sumpter et.al.: BJC (2005) 92, 1976-83

- 4-armet, metastatisk ventrikel-ca.: bl.a.:
- Respons-rate ECF 31%, ECX 35%, EOX 48%

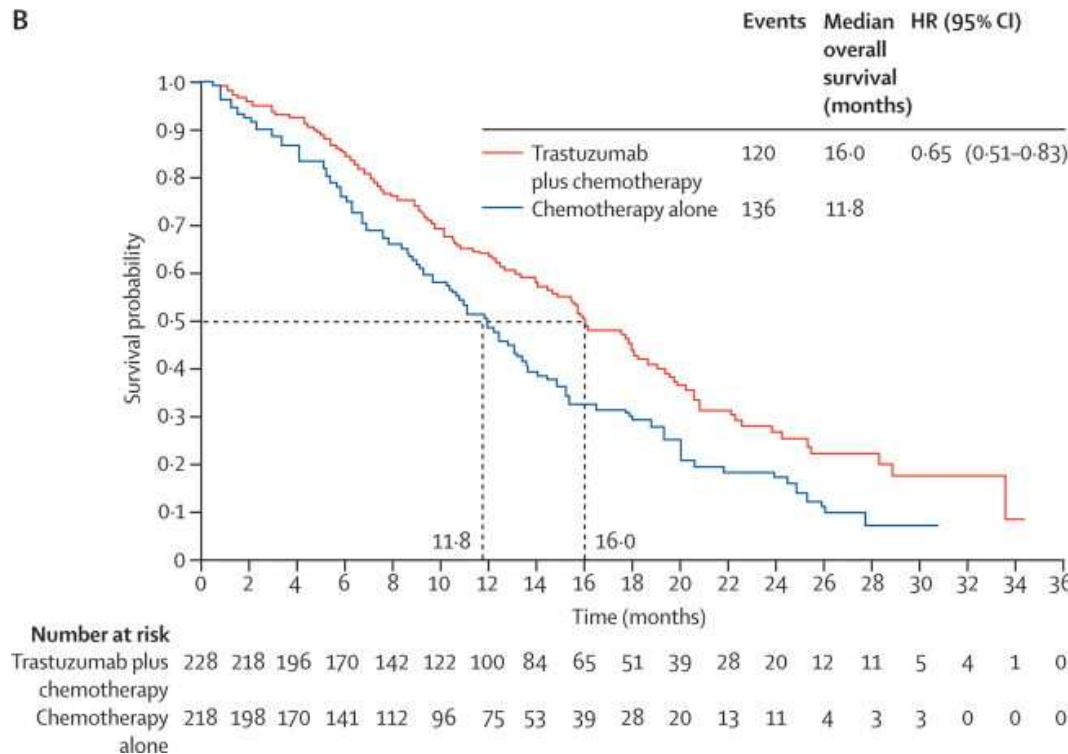
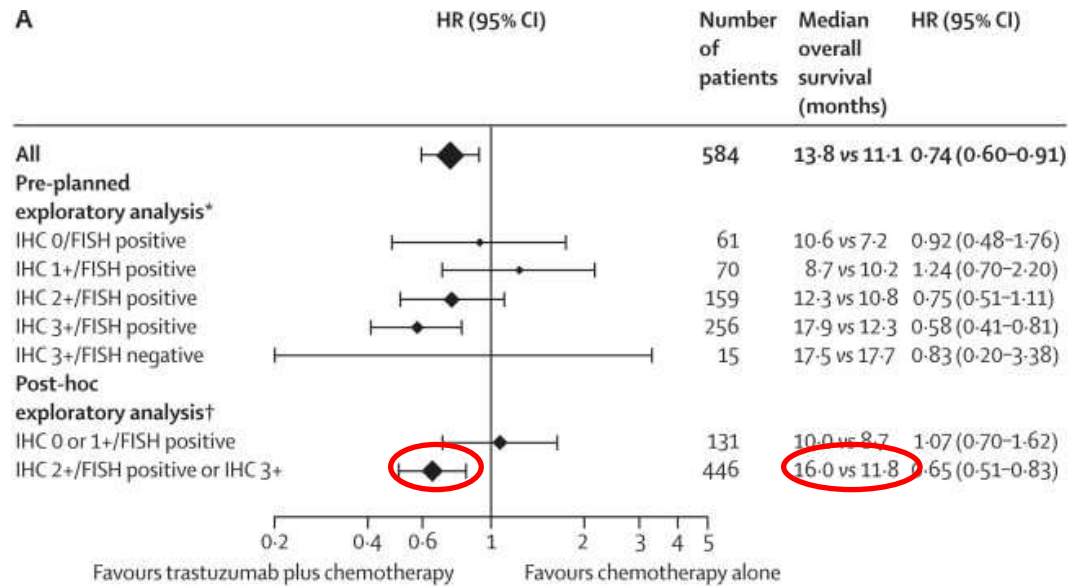
Det var om kurativ ventrikkel,

nå går vi til palliasjons -behandling av ventrikkel-ca....

Ventrikkel, stadium IV

ToGA study

[Lancet](#). 2010 Aug 28;376(9742):687-97.



NGICG 2011:
Herceptin ved palliative HER2-positive
Ventrikkel-pasienter

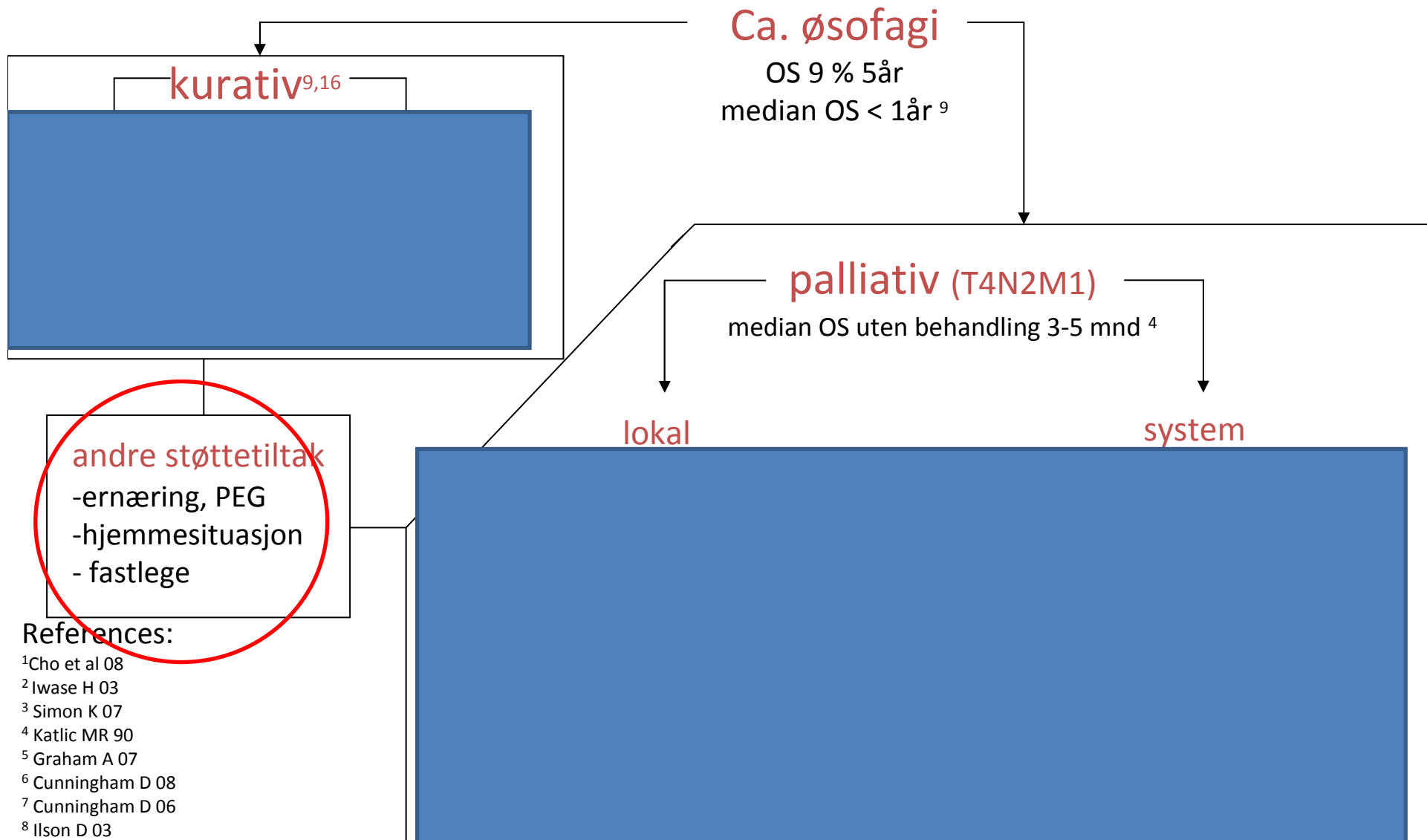
Curative	Histology	Etiology	Epi- demiology	Imaging	Oncology	Surgery
					BSC/Nutritional support	
Esophagus						
GE- junction						
Gastric	<u>adeno</u> -intestinal -diffuse -Her2	obesity Helicobacter ??		PET	3 EOX Surgery (3EOX)	+

Palliative	Chemo 1.line	Chemo 2.line	Extern irradiation	Brachy- therapy	Stent	Surgery
	BSC/nutritional support					
Esophagus squamous						
Esophagus adeno						
GE- junction						
Gastric	EOX (OX+Herceptin)	Irinotecan/ Taxanes	—	—	—	—

Behandling av Ca. øsofagi

en personlig mening (evidence level 4) fra Christian
Kersten (SFK) og et forsøk på å være
kunnskapsbasert

- et utgangspunkt for en diskusjon -



References:

- ¹Cho et al 08
- ²Iwase H 03
- ³Simon K 07
- ⁴Katlic MR 90
- ⁵Graham A 07
- ⁶Cunningham D 08
- ⁷Cunningham D 06
- ⁸Ilson D 03
- ⁹Jackson 07
- ¹⁰Lancet 359; (9319)
- ¹¹Burmester 05
- ¹²Wang 01
- ¹³Dormann 03
- ¹⁴SHdir
- ¹⁵Al-Sarraf 97
- ¹⁶Okins 08

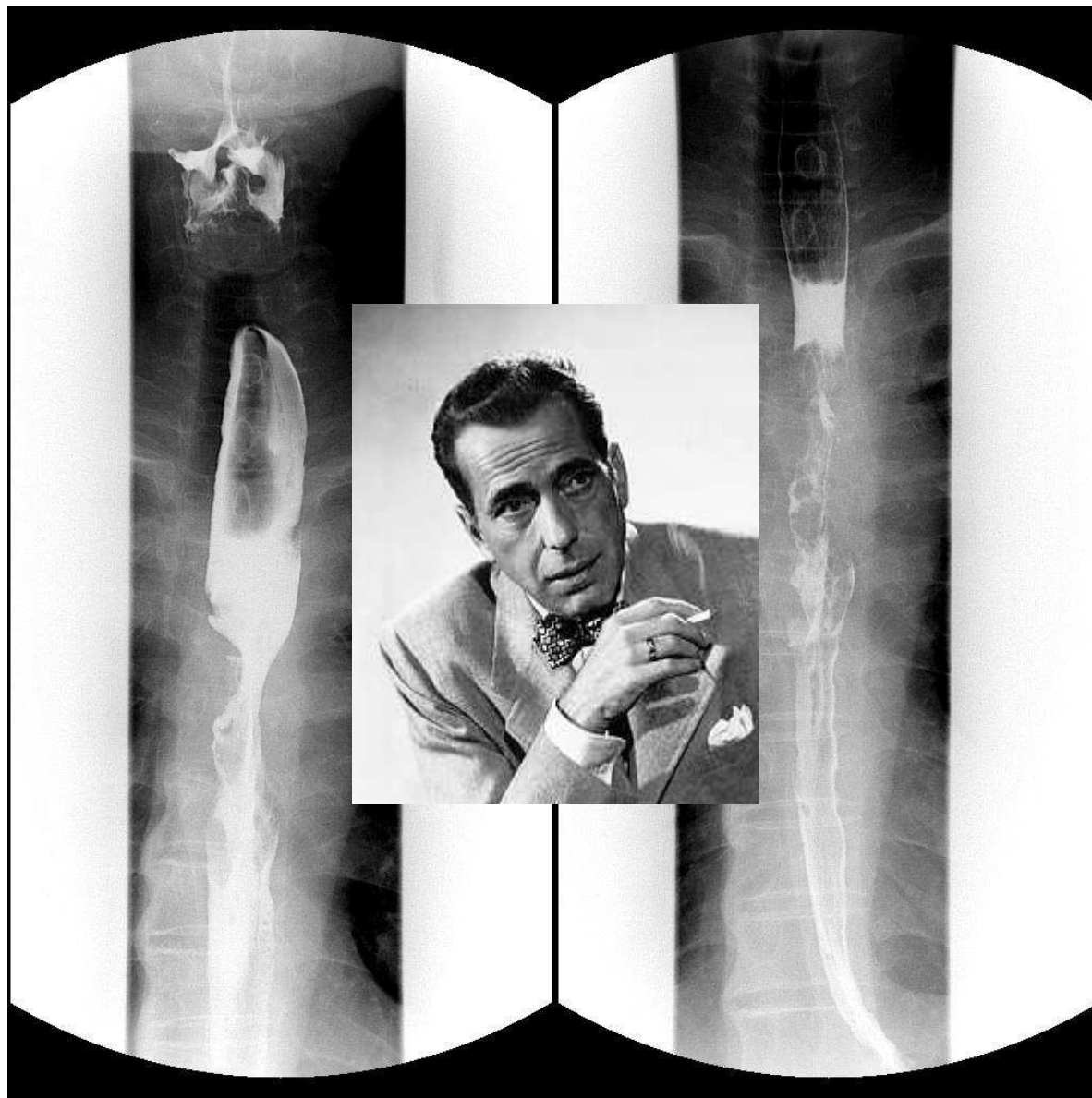
To store caveats
ved tolkning av den eksisterende litteraturen

Er de publiserte pasientene de samme som vi ser ?



noen mennesker er blomstrende...

Er de publiserte pasientene de samme som vi ser ?



andre fremstår mer grå...

i tillegg er ”spiserørskreft” ikke det samme som for 20 år siden...

Avbrekk:

Hva er forskjellen mellom svarte og hvite mennesker?

Hva er forskjellen mellom menn og kvinner ?

Changing Epidemiologic Landscape of Esophageal and Gastric Cancer

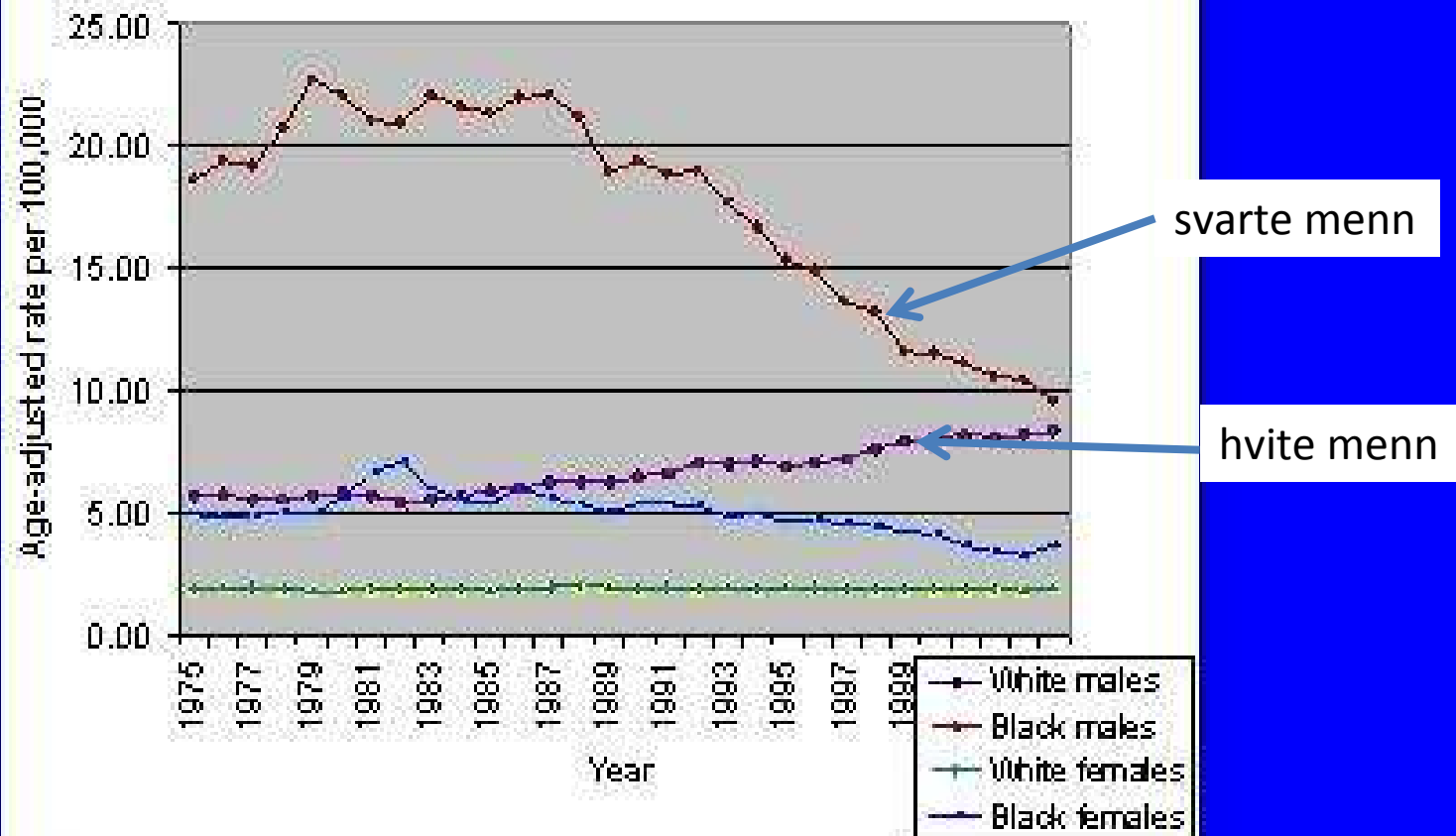
William J. Blot, Ph.D.

**Vanderbilt University
and
International Epidemiology Institute**

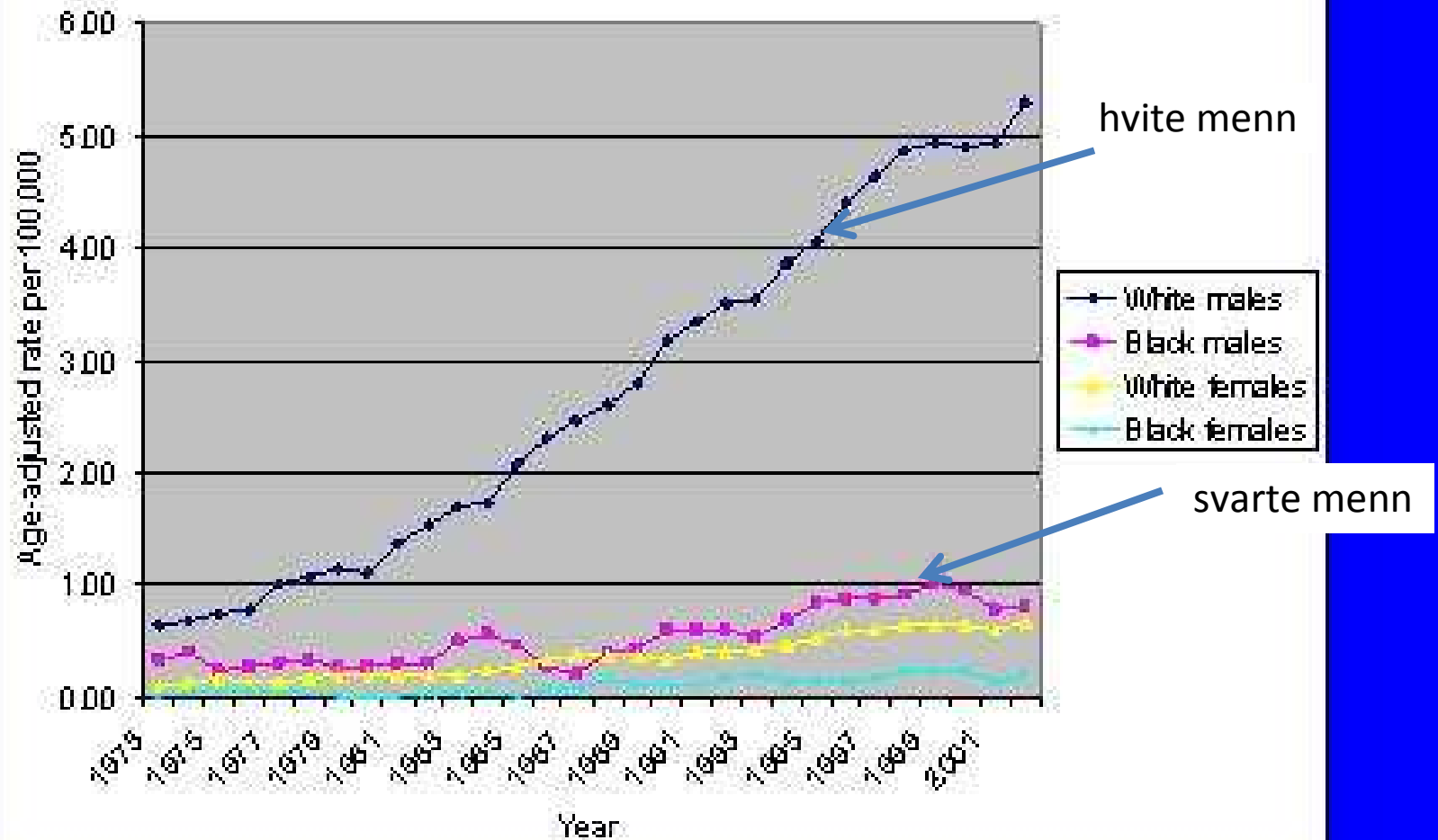
2008 GI CANCER SYMPOSIUM

Changes in incidence over time have been as or more pronounced for esophageal and stomach cancers than for any other cancer

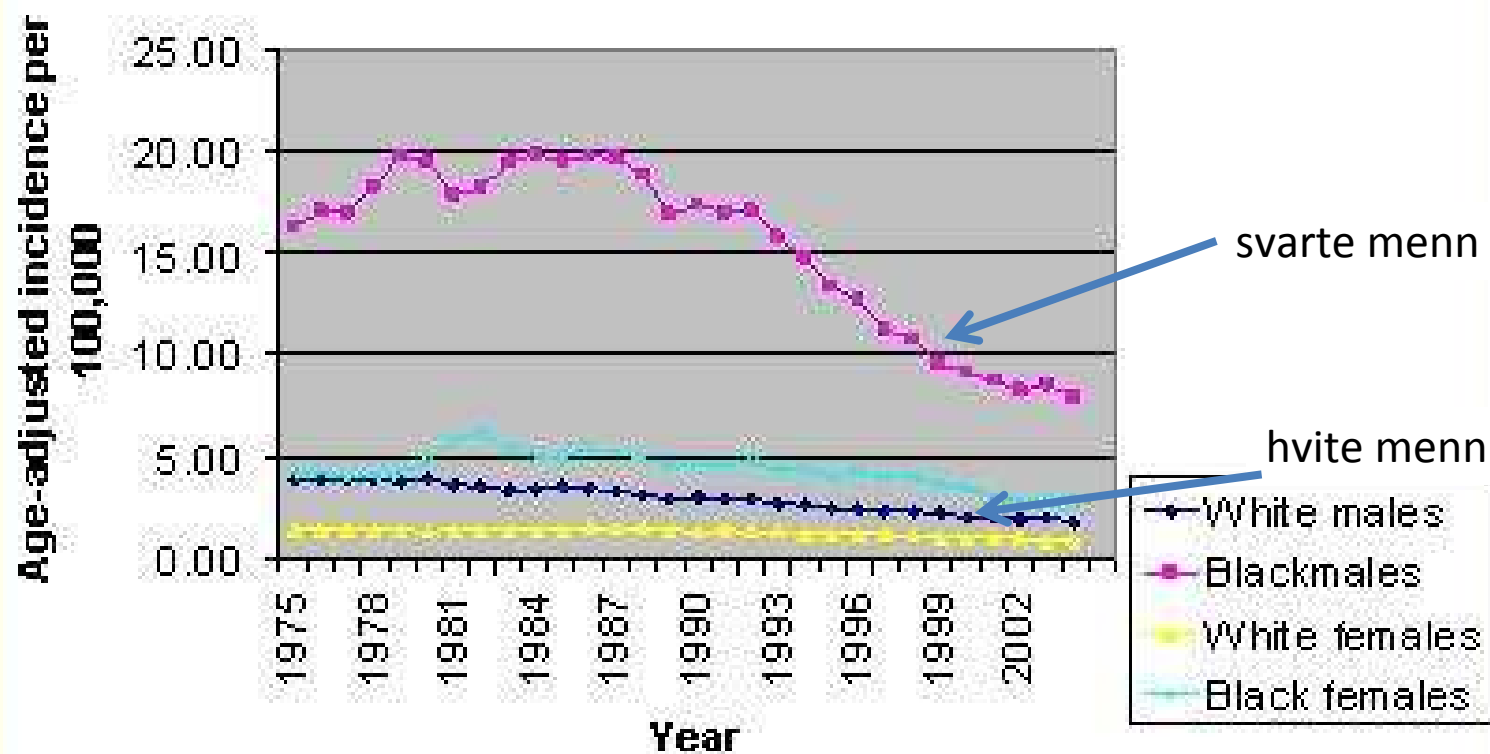
Trends during 1973-2004 in overall esophageal cancer incidence rates



Trends during 1973-2004 in esophageal adenocarcinoma incidence rates



Trends during 1973-2004 in incidence of squamous cell carcinoma of the esophagus



What is causing these striking
temporal trends and demographic
differences?

Answer:



What is causing these striking
temporal trends and demographic
differences?

Answer: It's not clear.

I 2012 behandles adeno og plateepitel-ca i prinsippet likt i Norge

TNM 2010:

- “Histology also influences the pattern of first recurrence after resection.
- In summary, there seems little doubt that esophageal SCC and adenocarcinoma represent two different diseases with characteristic pathogenesis, epidemiology, tumor biology, and outcomes.
- In acknowledgement of these differences, the most recent 2010 TNM staging system provides separate stage groupings.”

Eksisterende publikasjonene
beror på en blanding av adeno- og plateepitel-ca...

Operasjon vs Stråling

Et behov for mer samarbeid i randomiserte studier mellom kirurgene og onkologene !!

- prostata-ca
 - tidlig lunge-ca
 - enkelte hjerne-metastaser
 - truende tverrsnitt
 - etc etc etc
-
- ØSOFAGUS-KANSER

Skal resektable øsofagus-kansere opereres?

Onkologiske argumenter

Table 1. Overall Survival by Treatment Group*.

Table 1. Overall Survival by Treatment Group*

Time, y	No. (%) Alive Following Radiation Therapy Only (Randomized)	No. (%) Alive Following Combined Modality Therapy	
		Randomized	Nonrandomized
0	62 (100)	61 (100)	69 (100)
1	21 (34)	32 (52)	43 (62)
2	6 (10)	22 (36)	24 (35)
3	0 (0)	18 (30)	18 (26)
4	0 (0)	17 (30)	13 (19)
5	0 (0)	14 (26)	10 (14)
6	0 (0)	12 (22)	6 (10)†
7	0 (0)	12 (22)	2 (6)†
8	0 (0)	10 (22)	...
9	0 (0)	4 (20)†	...
10	0 (0)	3 (20)†	...
Total dead (median, mo)	62/62 (9.3)	48/61 (14.1)	65/69 (16.7)

*Percentages are estimated. Data compiled by Kaplan-Meier method. Statistical test results of the log-rank test are: randomized comparison, $P < .001$; and combined modality therapy and radiation therapy (randomized vs nonrandomized), $P = .24$ (stratified by tumor stage). Ellipses indicate data not available because follow-up lasted less than 8 years.

†Percentages are unreliable due to the small number of people at risk.

Cooper, J. S. et al. JAMA 1999;281:1623-1627

JAMA

Table 2. Survival Estimates by Histologic Type After Combined Modality Therapy*.

Table 2. Survival Estimates by Histologic Type After Combined Modality Therapy*

Time, y	Adenocarcinoma		Squamous Cell	
	No. (%) Alive	95% Confidence Interval, %	No. (%) Alive	95% Confidence Interval, %
0	23 (100)	...	107 (100)	...
1	12 (52)	32-73	63 (59)	50-68
2	5 (22)	5-39	41 (38)	29-48
3	4 (17)	2-33	32 (30)	21-39
4	3 (13)	0-27	27 (26)	18-34
5	3 (13)	0-27	21 (21)	13-29
Total dead (median, mo)	22/23 (12.2)		91/107 (16.9)	

*Data includes randomized and nonrandomized values combined. Percentages are estimated. Data compiled by the Kaplan-Meier method. $P = .15$ for adenocarcinoma vs squamous cell carcinoma.

Operasjon vs Stråling

- Operasjon og Stråling har rapportert omtrent samme 5 års overlevelse, ca. 20-25%
- Stråling= CRT med 50Gy+CiFU (like bra som 64 Gy!!?) RTOG 85-01
- Operasjon alene ved N+ sykdom gir ca. 15% 5 års overlevelse Dis Esophagus. 2009;22(5)

Operasjon vs Stråling

- Operasjon og Stråling har rapportert samme 5 års overlevelse, ca. 20-25%
- Stråling= CRT med 50Gy+CiFU (like bra som 64 Gy!!?) RTOG 85-01
- Operasjon alene ved N+ sykdom gir 15% 5 års overlevelse Dis Esophagus. 2009;22(5)

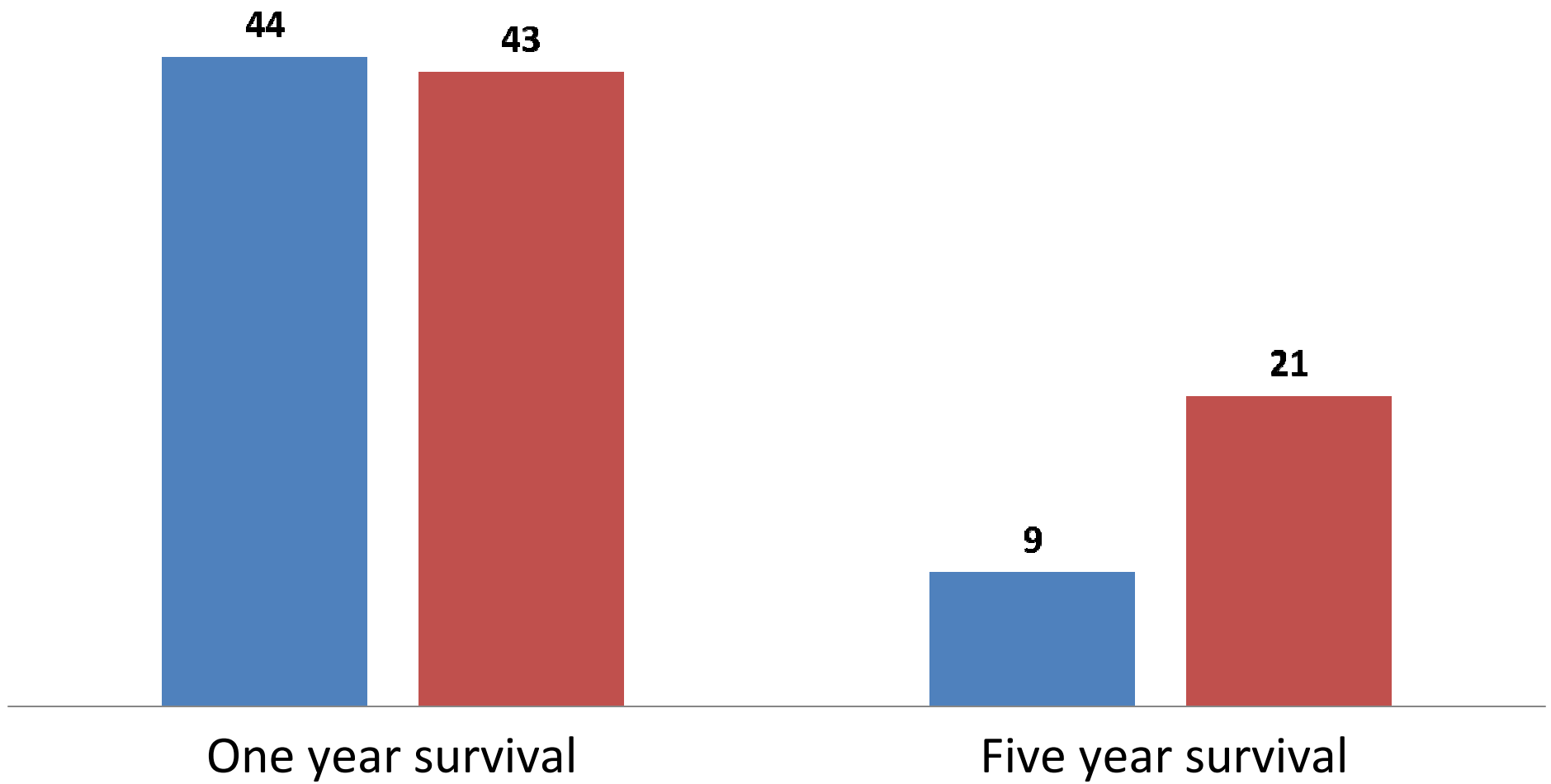
Når man ikke vil velge ta man Ole Brumm? **CRT+ Kirurgi:**

Vi venter bl.a. på CROSS-studien: 41.4 Gy + Paclitaxel (pCR på 33%!)
og NeoRes-studien (CiFu)



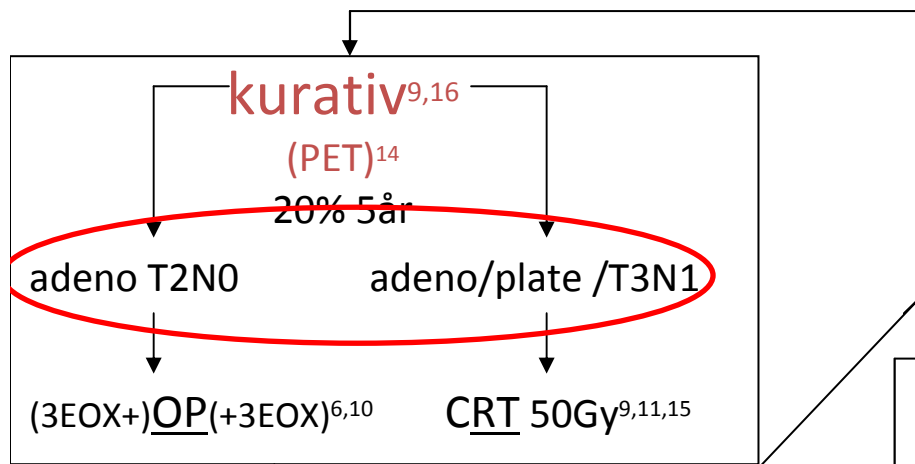
Survival in Norway in % 2000-4

■ Esophagus ■ Gastric



Ca. øsofagi

OS 9 % 5år
median OS < 1år ⁹



palliativ (T4N2M1)

median OS uten behandling 3-5 mnd ⁴

lokal

system

andre støttetiltak

- ernæring, PEG
- hjemmesituasjon
- fastlege

References:

- ¹Cho et al 08
- ²Iwase H 03
- ³Simon K 07
- ⁴Katlic MR 90
- ⁵Graham A 07
- ⁶Cunningham D 08
- ⁷Cunningham D 06
- ⁸Ilson D 03
- ⁹Jackson 07
- ¹⁰Lancet 359; (9319)
- ¹¹Burmester 05
- ¹²Wang 01
- ¹³Dormann 03
- ¹⁴SHdir
- ¹⁵Al-Sarraf 97
- ¹⁶Okines 08

Curative	Histology	Etiology	Epi- demiology	Imaging	Oncology	Surgery
					BSC/Nutritional support	
Esophagus	squamous	smoking Alcohol ??	↓	PET Diagnostic Prognostic predictive	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine	+ _{T2N0} / - _{T3N1-2}
	adeno	obesity reflux Helicobacter ??	↑	PET	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine 3 EOX Surgery (3EOX)	+ / -
GE- junction						
Gastric	<u>adeno</u> -intestinal -diffuse -Her2	obesity Helicobacter ??	↓	PET	3 EOX Surgery (3EOX)	+

Ca. øsofagi

OS 9 % 5år
median OS < 1år⁹

kurativ^{9,16}

(PET)¹⁴

20% 5år

adeno/plate T2N0

plate/T3N1

(3EOX+)OP(+3EOX)^{6,10}

CRT 50Gy^{9,11,15}

andre støttetiltak

- ernæring, PEG
- hjemmesituasjon
- fastlege

palliativ (T4N2M1)

median OS uten behandling 3-5 mnd⁴

lokal

system

OP?

- adeno

stent

- opptil 64% kompl.¹²
- re-intervention 21%¹³

CRT?/plate

- OS 6-11mnd^{1,2,3}
- 20% SE¹

kjemo

respons på dysfagi 80-90%!!⁸

1. EOX

tumorrespons 50%
OS 11mnd⁶

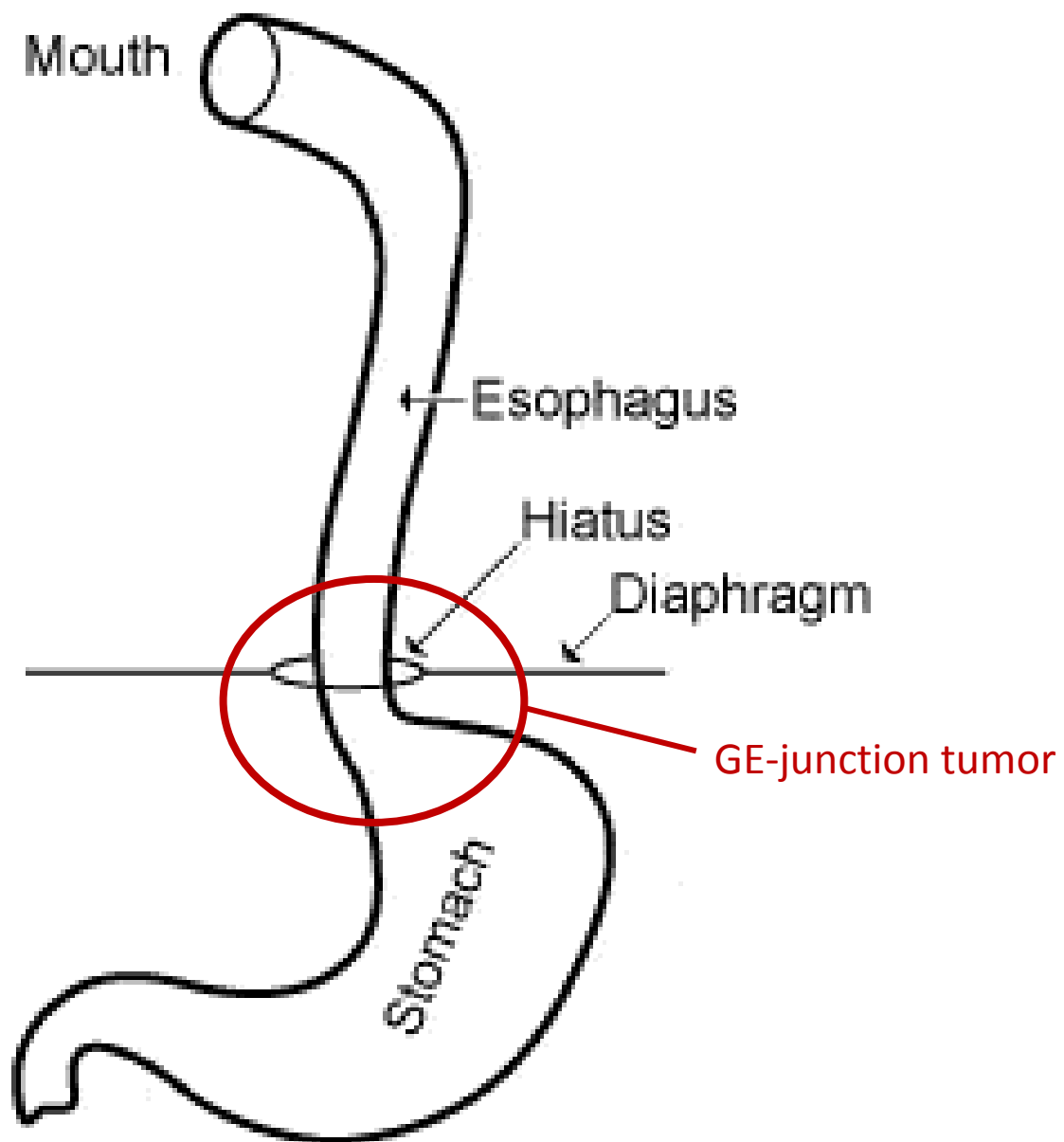
(2.Txt, kun for respondere)

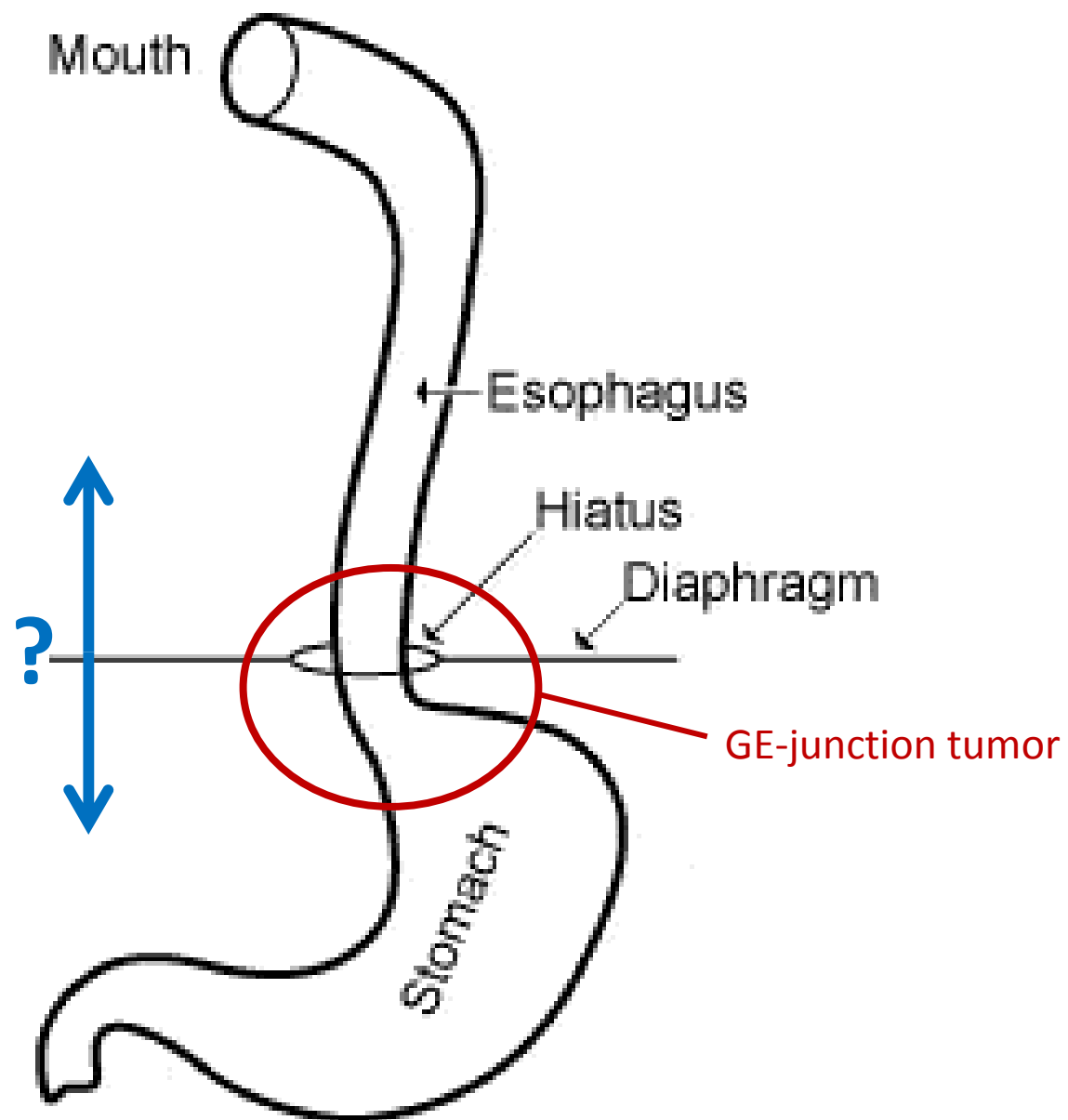
tumorrespons 17-35%⁸
((Campto 15%))⁸

References:

- ¹Cho et al 08
- ²Iwase H 03
- ³Simon K 07
- ⁴Katlic MR 90
- ⁵Graham A 07
- ⁶Cunningham D 08
- ⁷Cunningham D 06
- ⁸Ilson D 03
- ⁹Jackson 07
- ¹⁰Lancet 359; (9319)
- ¹¹Burmester 05
- ¹²Wang 01
- ¹³Dormann 03
- ¹⁴SHdir
- ¹⁵Al-Sarraf 97
- ¹⁶Okines 08

Palliative	Chemo 1.line	Chemo 2.line	Extern irradiation	Brachy-therapy	Stent	Surgery
	BSC/nutritional support					
Esophagus squamous	Taxanes CiFU EOX	EOX CiFU Taxanes	+	+	+	-
Esophagus adeno	EOX	Irinotecan/ Taxanes	+	+	+	-
GE-junction						
Gastric	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-

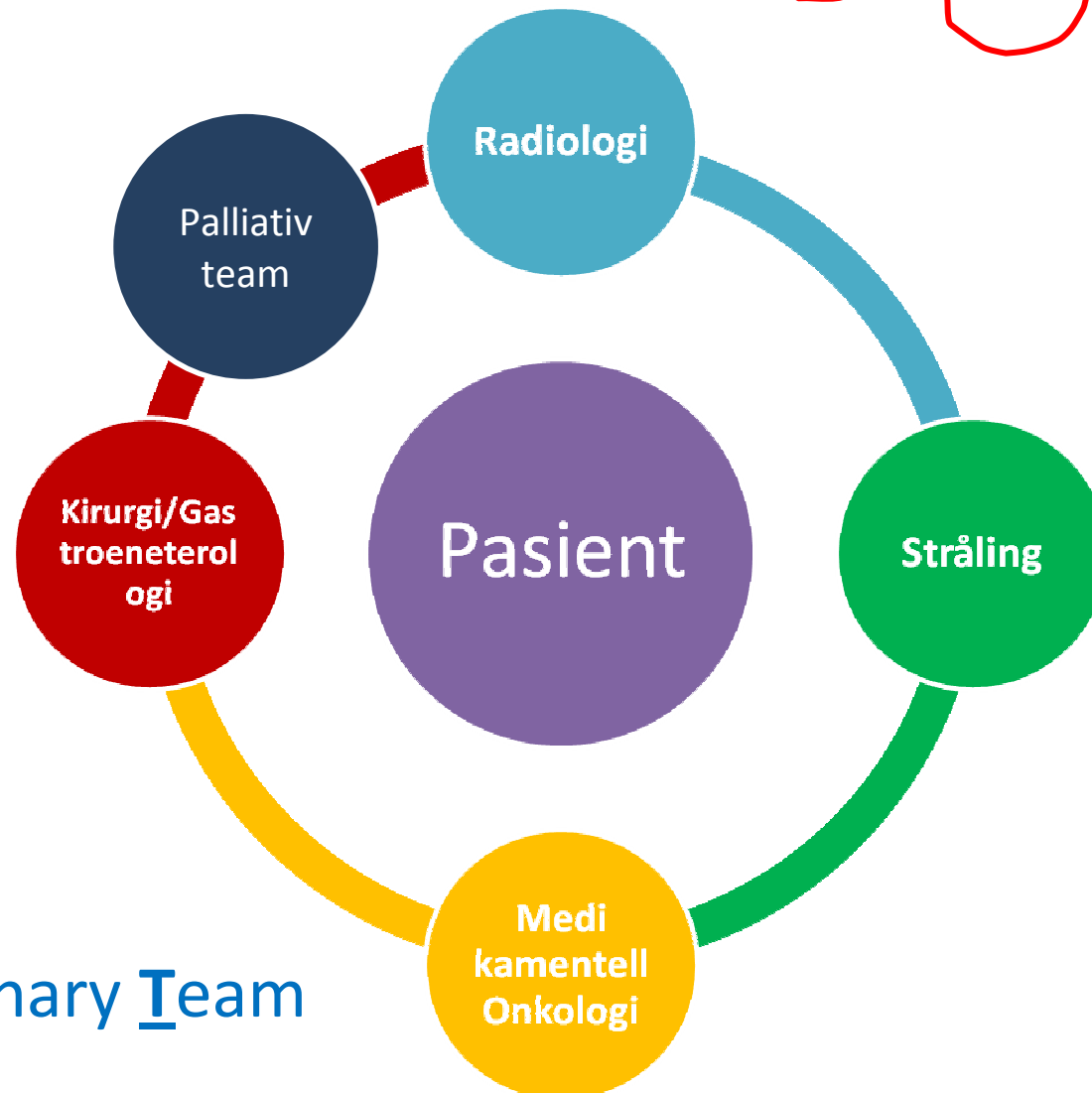
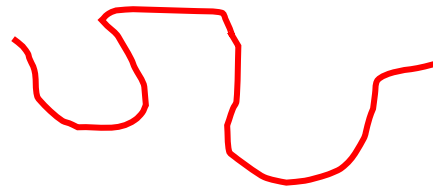




Curative	Histology	Etiology	Epi- demiology	Imaging	Oncology		Surgery
					BSC/Nutritional support		
Esophagus	squamous	smoking Alcohol ??	↓	PET Diagnostic Prognostic predictive	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine	+ _{T2N0} / - _{T3N1-2}	
	adeno	obesity reflux Helicobacter ??	↑	PET	CRT (50Gy+CiFu) 64Gy; Taxanes; Capecitabine 3 EOX Surgery (3EOX)	+ / -	
GE- junction	<u>adeno</u> -intestinal -diffuse -Her2	obesity reflux Helicobacter ??	↑	Endoscopic US PET	3 EOX Surgery (3EOX)	+	
Gastric	<u>adeno</u> -intestinal -diffuse	obesity Helicobacter ??	↓	PET	3 EOX Surgery	+	

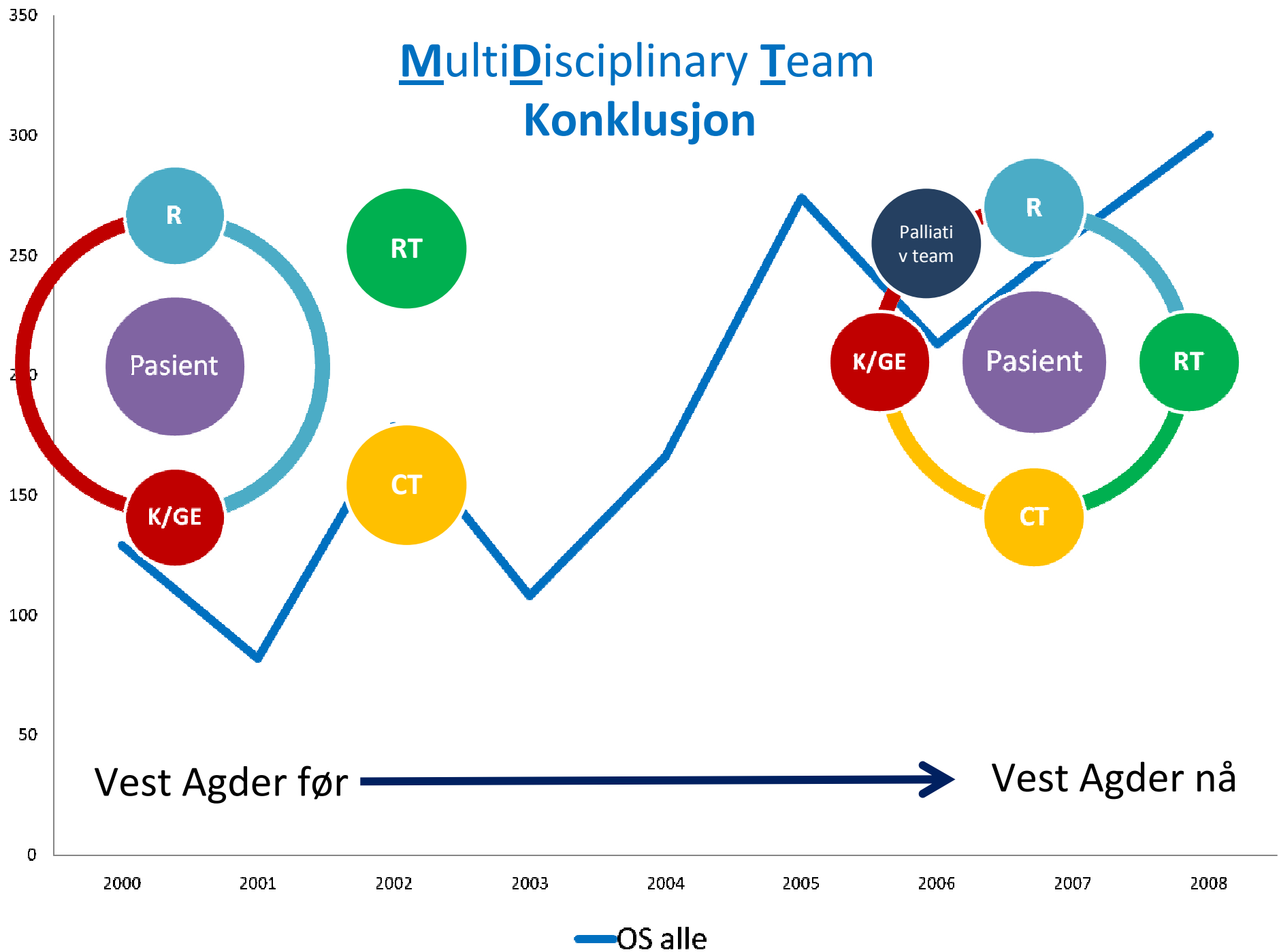
Palliative	Chemo 1.line	Chemo 2.line	Extern irradiation	Brachy-therapy	Stent	Surgery
	BSC/nutritional support					
Esophagus squamous	Taxanes CiFU EOX	EOX CiFU Taxanes	+	+	+	-
Esophagus adeno	EOX	Irinotecan/ Taxanes	+	+	+	-
GE-junction	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-
Gastric	EOX (OX+Herceptin)	Irinotecan/ Taxanes	-	-	-	-

Den røde tråden

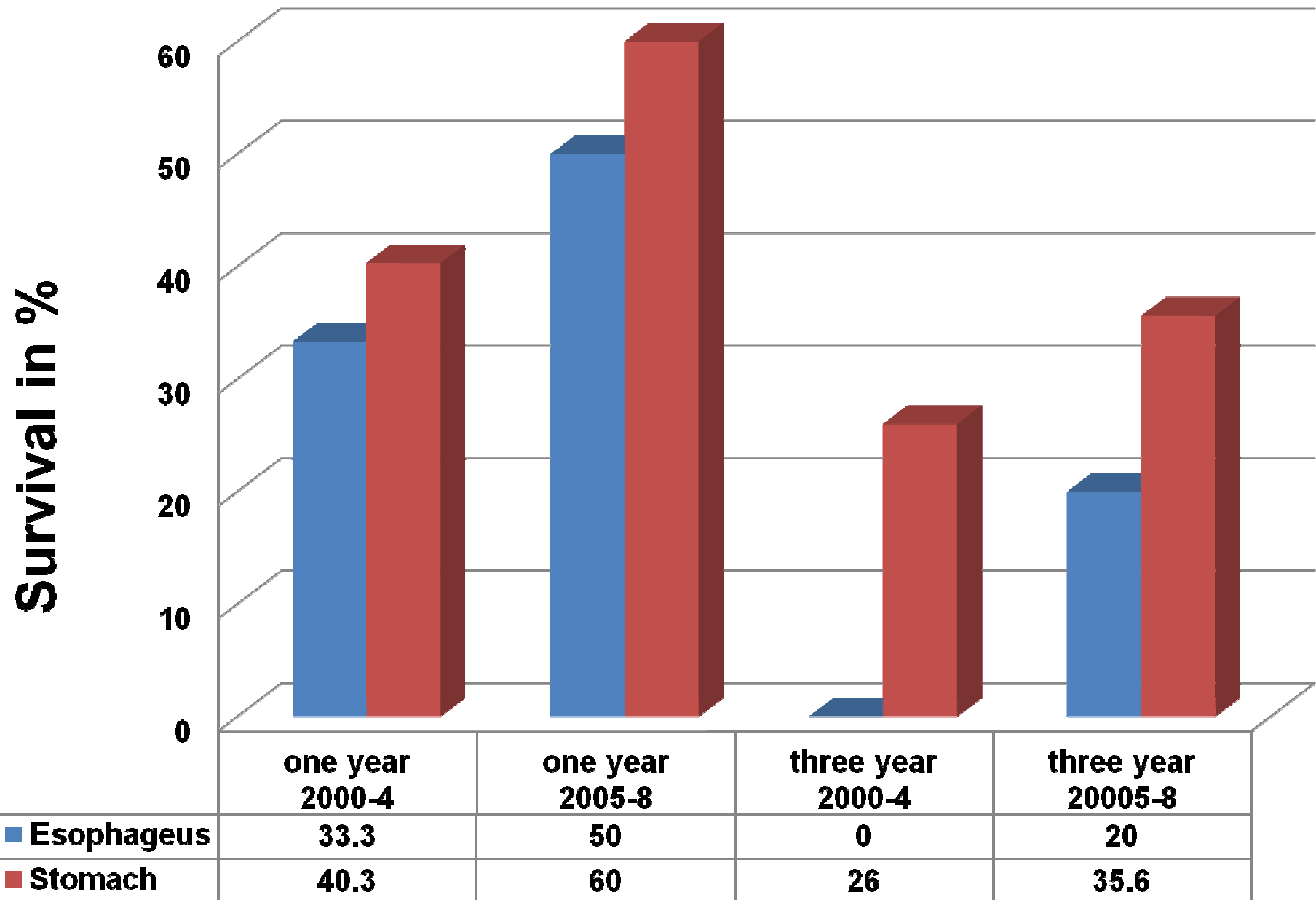


MultiDisciplinary Team

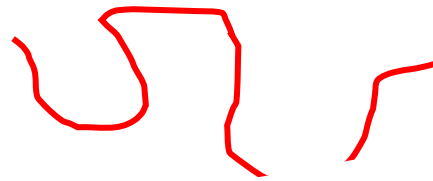
MultiDisciplinary Team Konklusjon



Survival effect after introduction of in-house MDT in West Agder



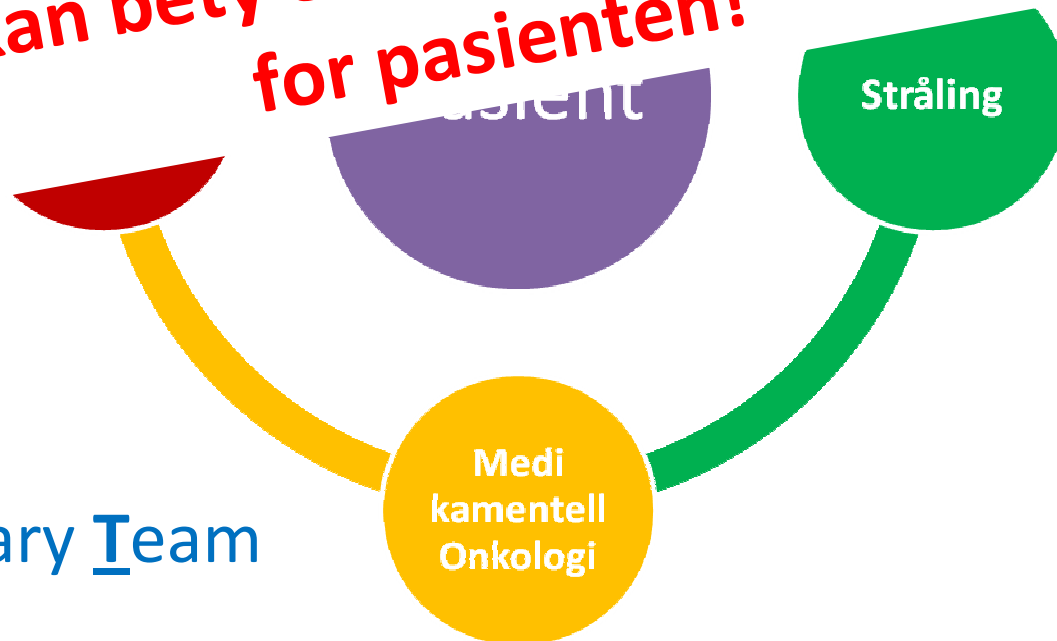
Den røde tråden



**Sørg for samarbeid!!
DU**

**kan bety en vesentlig forskjell
for pasienten!**

MultiDisciplinary Team



Takk for oppmerksomheten !
Spørsmål?

Christian Kersten, Senter for kreftbehandling