MESOTHELIOM

benign/ lokal (plauralt fibrom)

malign/ diffus

”Benektet” : ”Sekundære carcinomer”

(Robertson, 1924)

”Alveolært- cellecarsinom”

(Willis, 1953)

Akseptert:

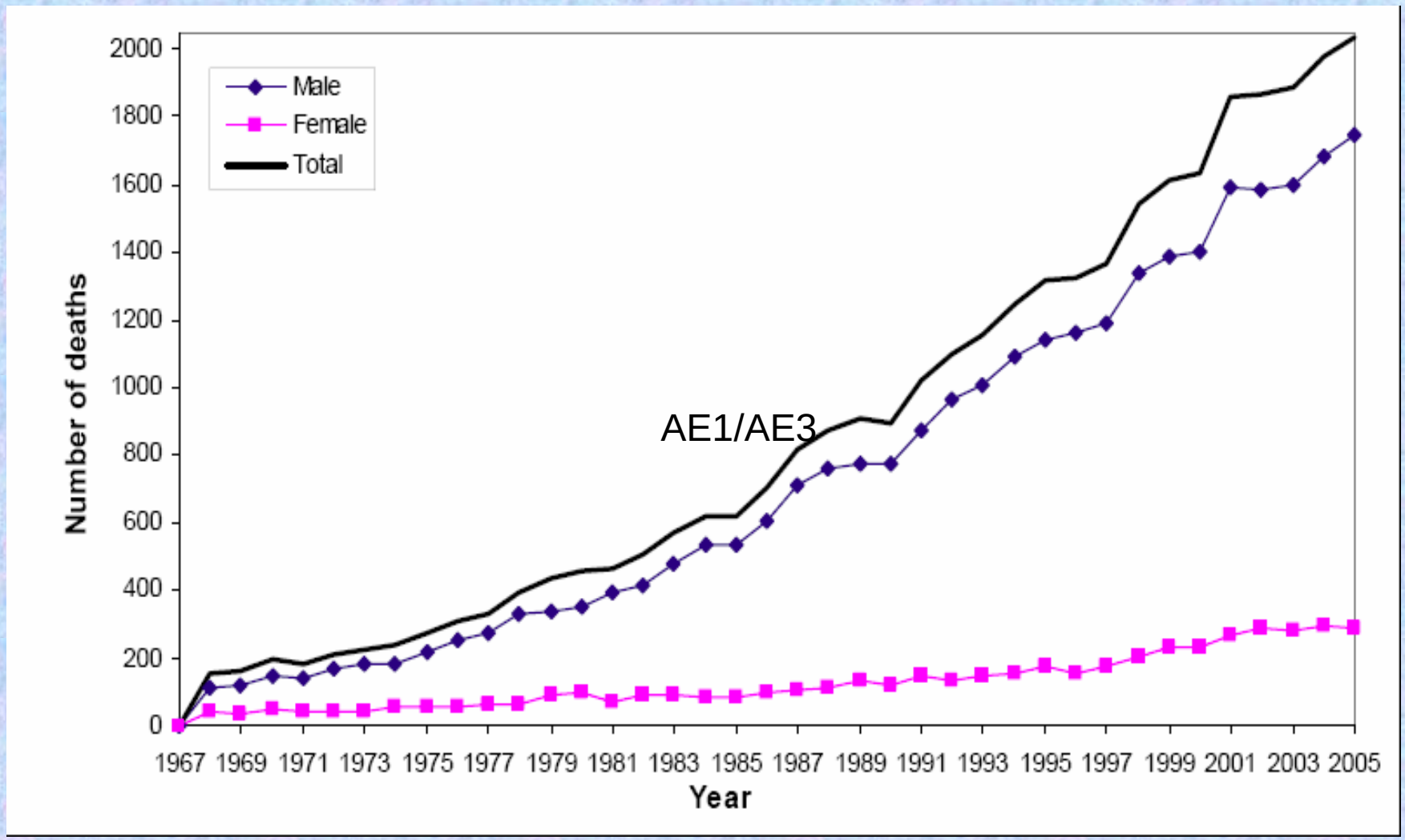
Plaurale mesotheliomer (1960)

Tumor på serosaoverflater,
plaura, peritoneum,--

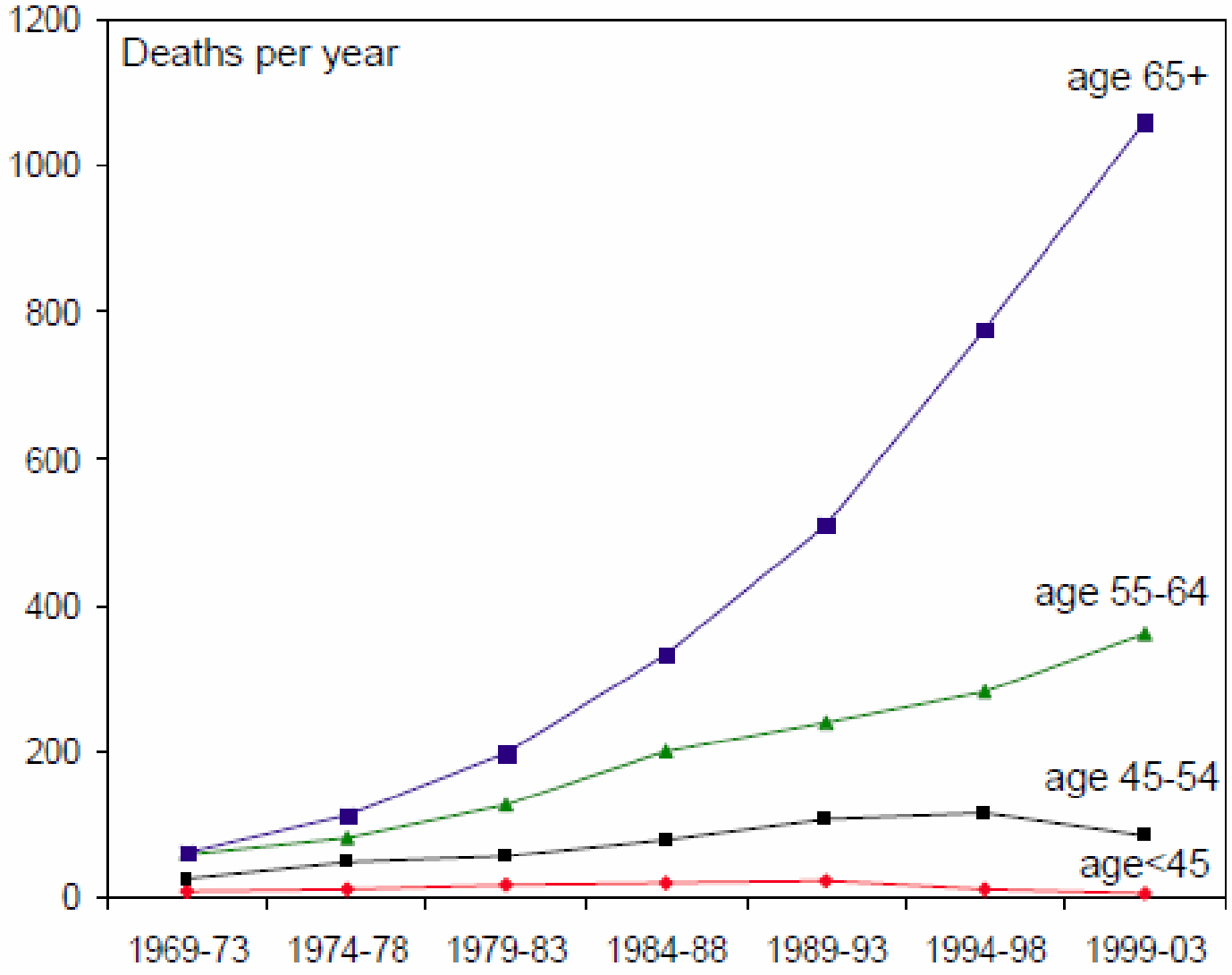
Økt hyppighet

Assosiert med asbestpåvirkning
Gruvearbeidere i Syd-Afrika
(Godwin, 1957) (Mc Caughey, 1958)
(Wagner, 1960)
Vest-Europa, Nord-Amerika, Australia
Kontakt med Crocidolite- Asbest

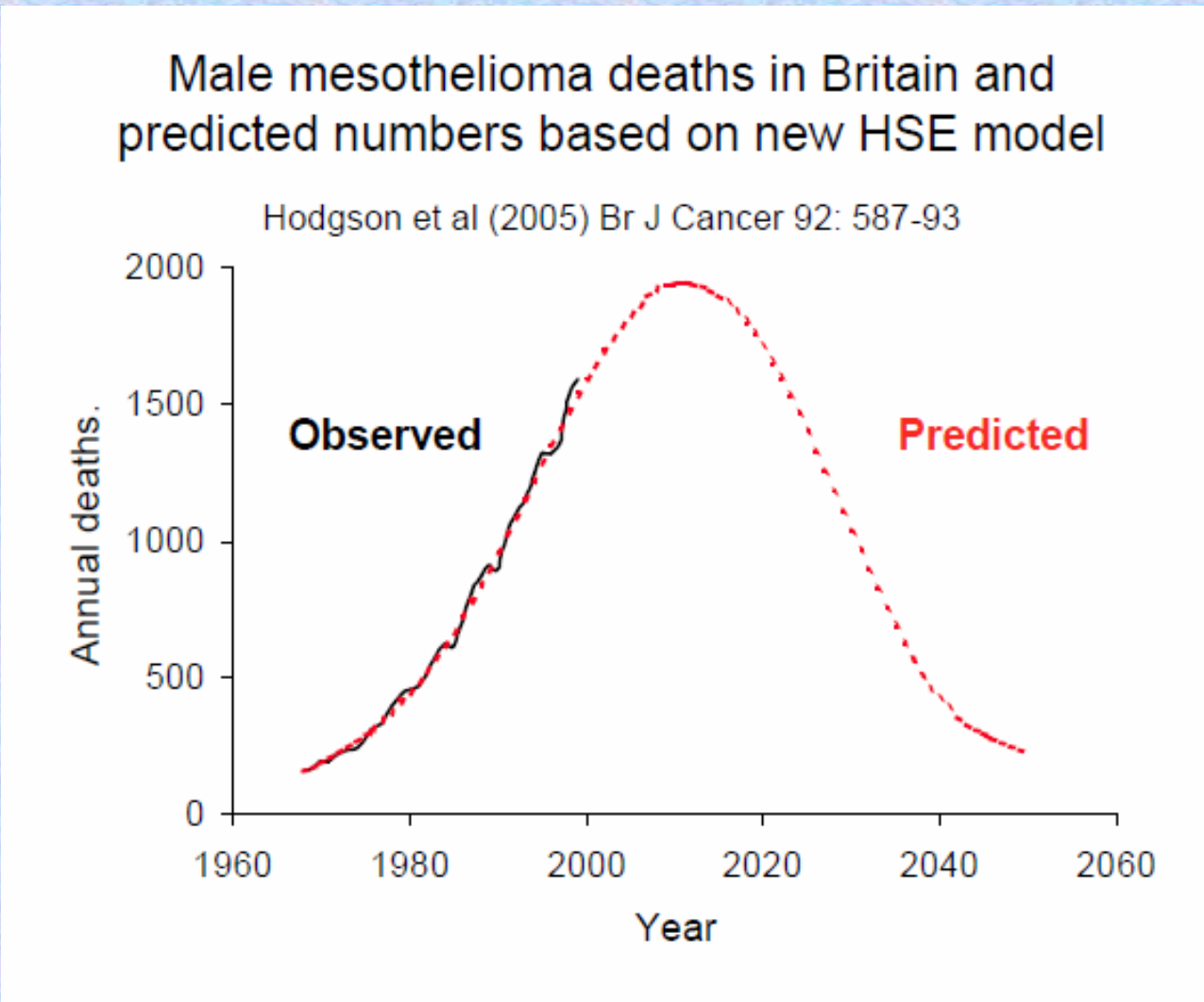
Også viktig økonomisk for familien!


Male
Female
Total
AE1/AE3
Number of deaths
Year
0
200
400
600
800
1000
1200
1400
1600
1800
2000
1967 1969 1971 1973 1975 1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997 1999 2001 2003 2005

British male mesothelioma deaths since 1969

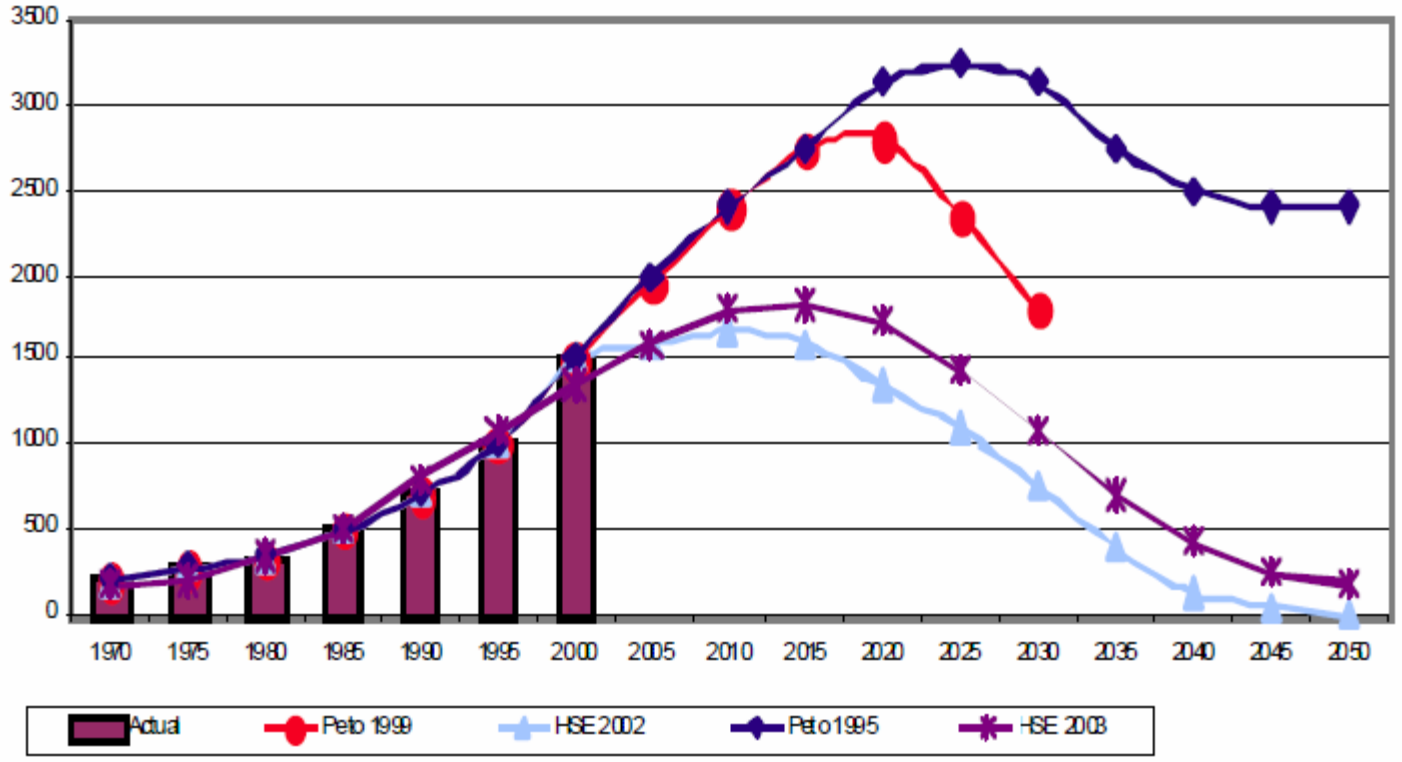


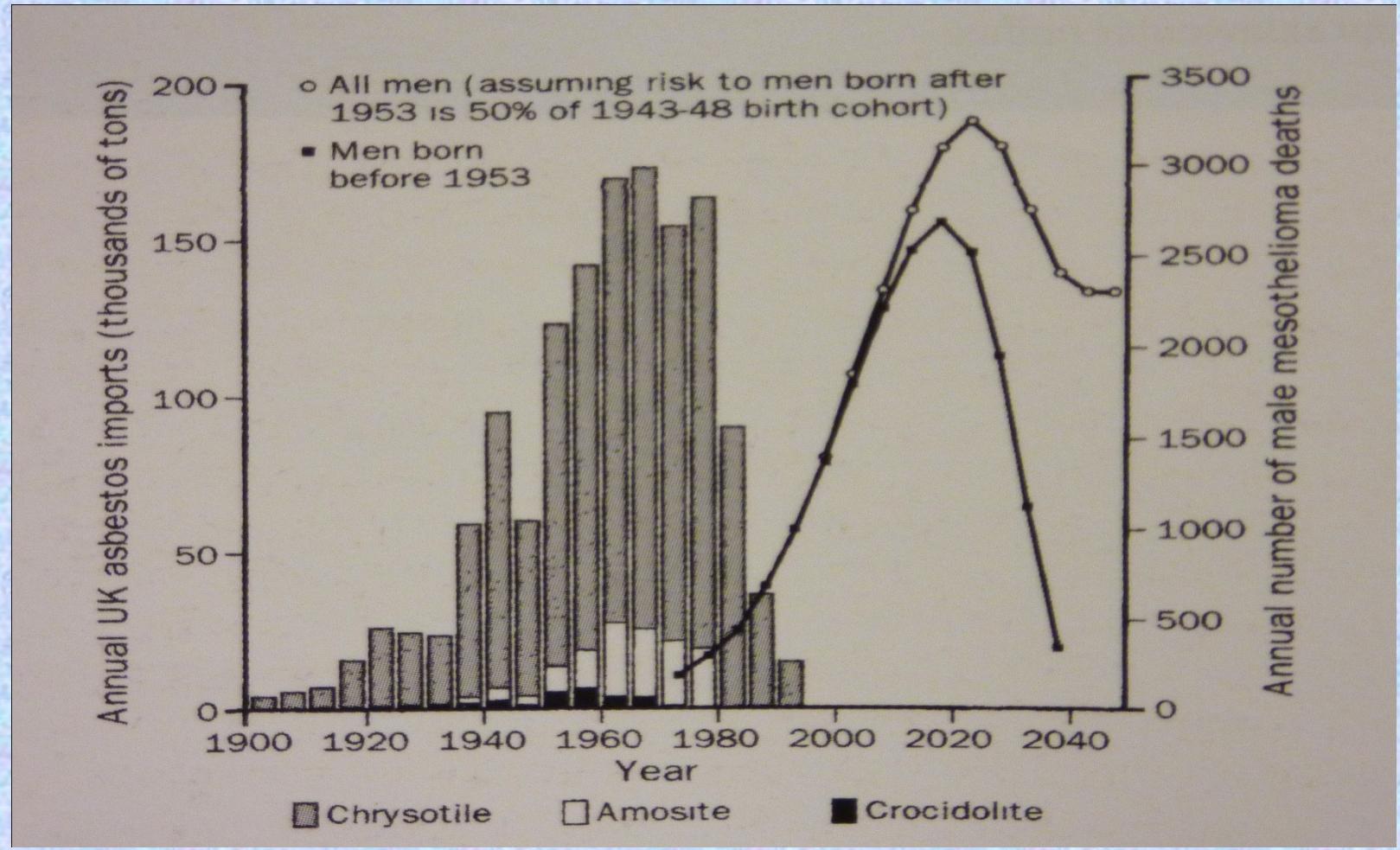
30,000 deaths already and a further 60,000 by 2050



Mesothelioma – projected male deaths to 2050

Airedale NHS Trust




All men (assuming risk to men born after 1953 is 50% of 1943-48 birth cohort)
Men born before 1953
Annual UK asbestos imports (thousands of tons)
Annual number of male mesothelioma deaths
200
150
100
50
0
3500
3000
2500
2000
1500
1000
500
0
1900
1920
1940
1960
1980
2000
2020
2040
Year
Chrysotile
Amosite
Crocidolite

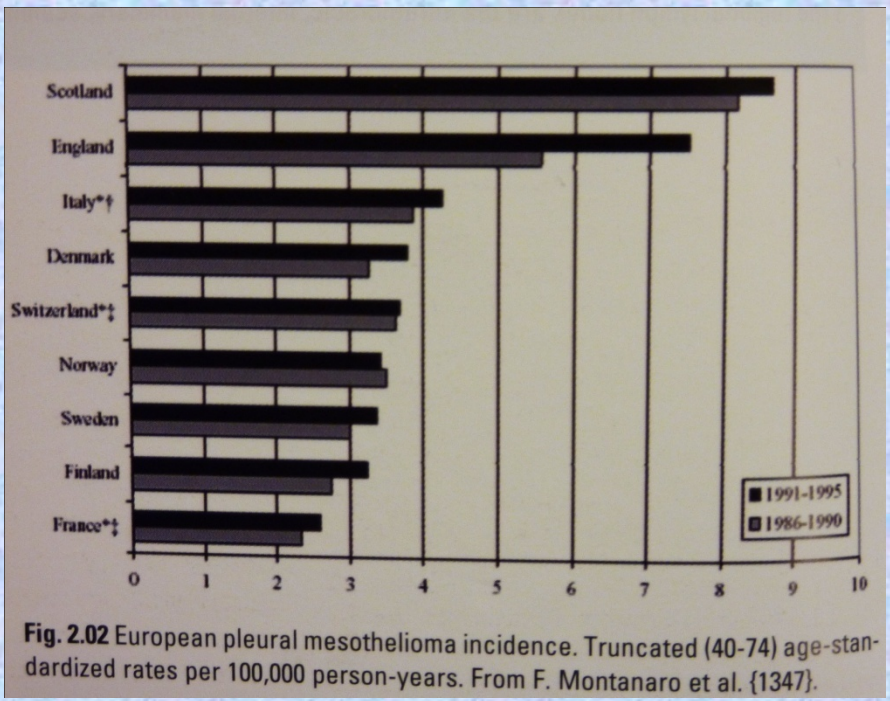
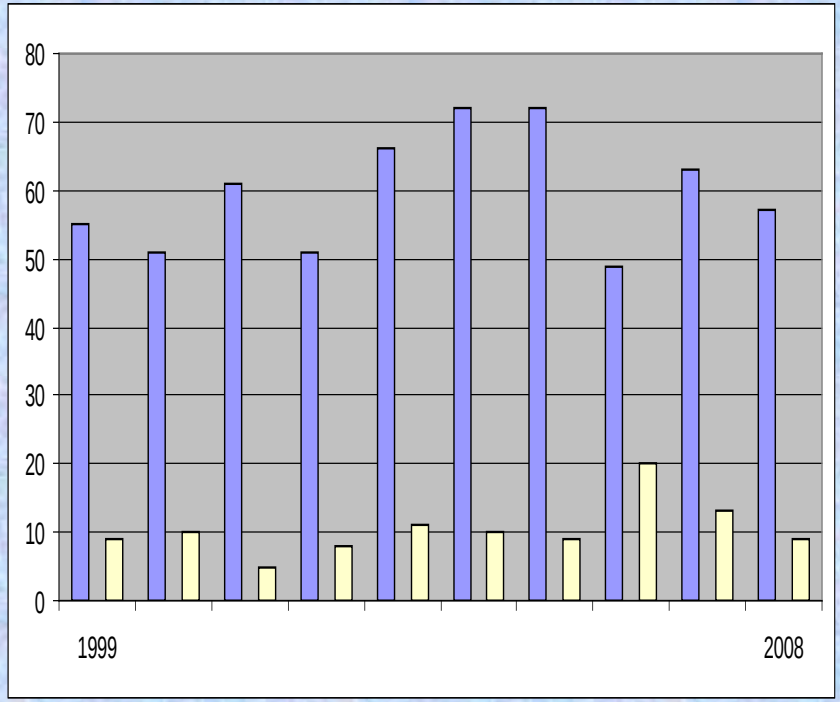


Fig. 2.02 European pleural mesothelioma incidence. Truncated (40-74) age-standardized rates per 100,000 person-years. From F. Montanaro et al. {1347}.

Norge,menn og kvinner



Etiologi

Eneste cancer med unik og klar link til en enkel Eksponering ! !

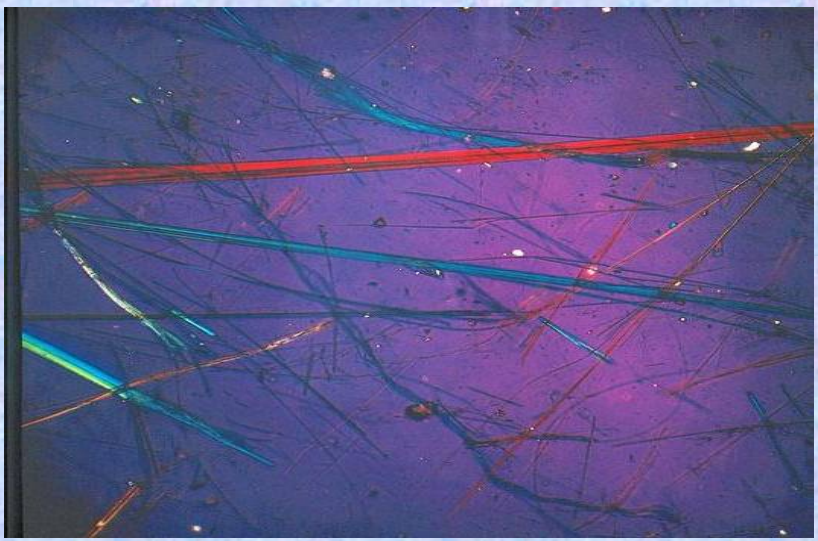
Asbestos (amphibole)

Non-asbestos mineral fibres – erionite

Radiation

Chronic inflammation

Virus (SV40)



Diagnose:

Rtg.

”Frozen chest”

Cytologi

Histologi

Yrkesanamnese

Thoracotomi (Laparotomi)

Crocidolite:
“Blue asbest”

Chrysotile:
Hvit asbest. Mest brukt, ”minst farlig”

Amosite:
Brown asbest

Photographs provided by
Kilpatrick & Associates

Crocidolite (Cape blue asbestod)

Kumuran/ Cape provinsen

90% av plaural, Peritoneal mesotheliom

Amosite Sjelden årsak

Chrysotile ”Ikke tumorfremkallende”?

Tremolite, farligst

Crocidolite

Amosite

Chrysotile

Actinolite

Anthophyllite

Kontakt 20-40 år før tumor

Asbestindustri

Dokkarbeidere

Selgere av asbestkomponenter

Boligområder i nærheten

Ca. 40% av obd. I USA – funnet asbestoselegemer

Ofte nær diagfragma- først

Plauraoverflate/ sammenvoksning

Plauraeffusjon/ hemorrhagisk

Tykk, fast,hvit ”plaura”

Sammenpresser lungen

Pericard

Motsatt plaura

Metastaser, sent

L.k., regionalt

Hjerne

Ben

Lever

Lunge

Invaderer ofte opr.-/ biopsiområdet

Hematogene metastaser

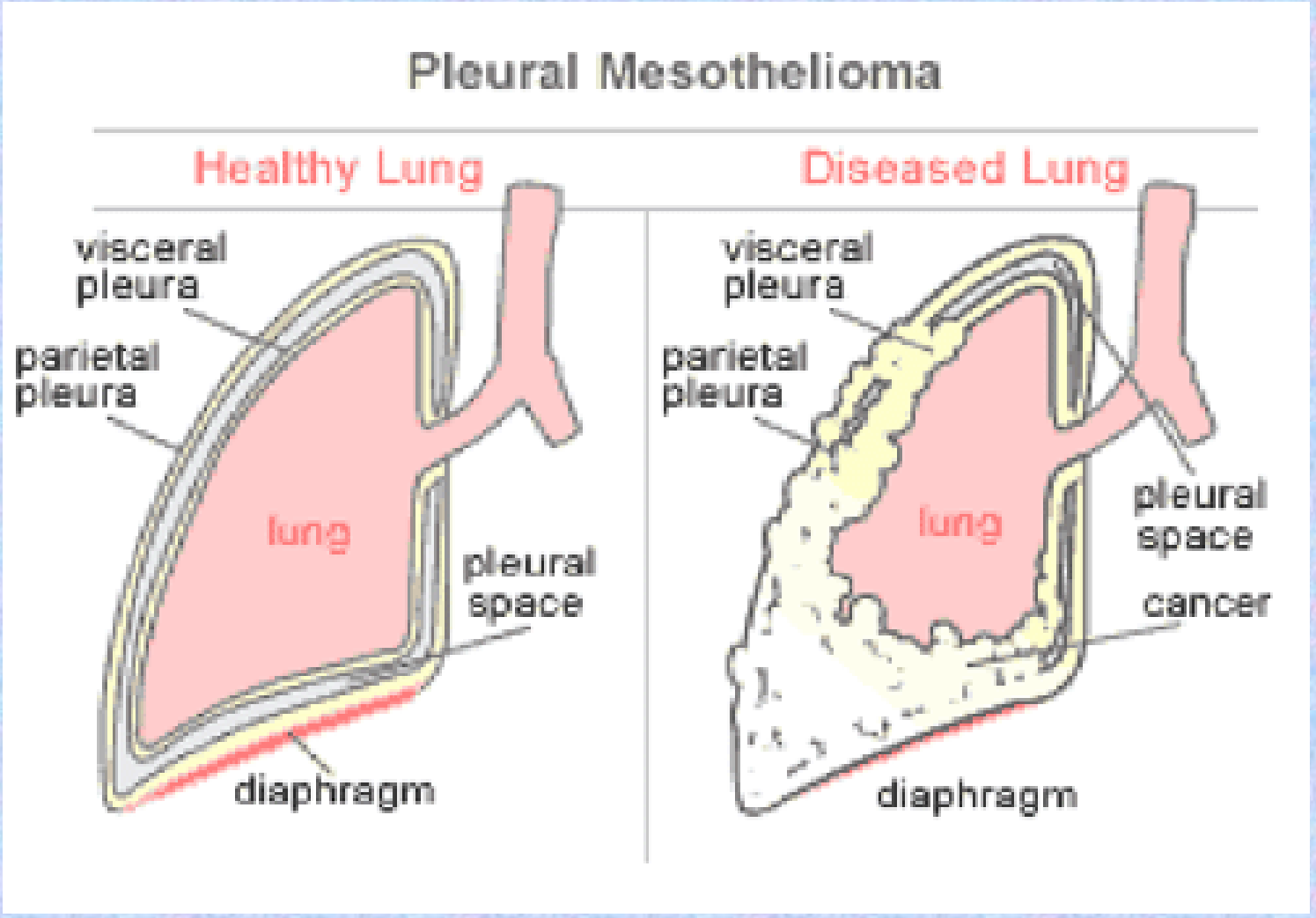
Plaura/ ikke lunge– hvorfor??
Asbestfibre- trofisme for mesothelialt vev?
Røyking, adjuvant faktor?

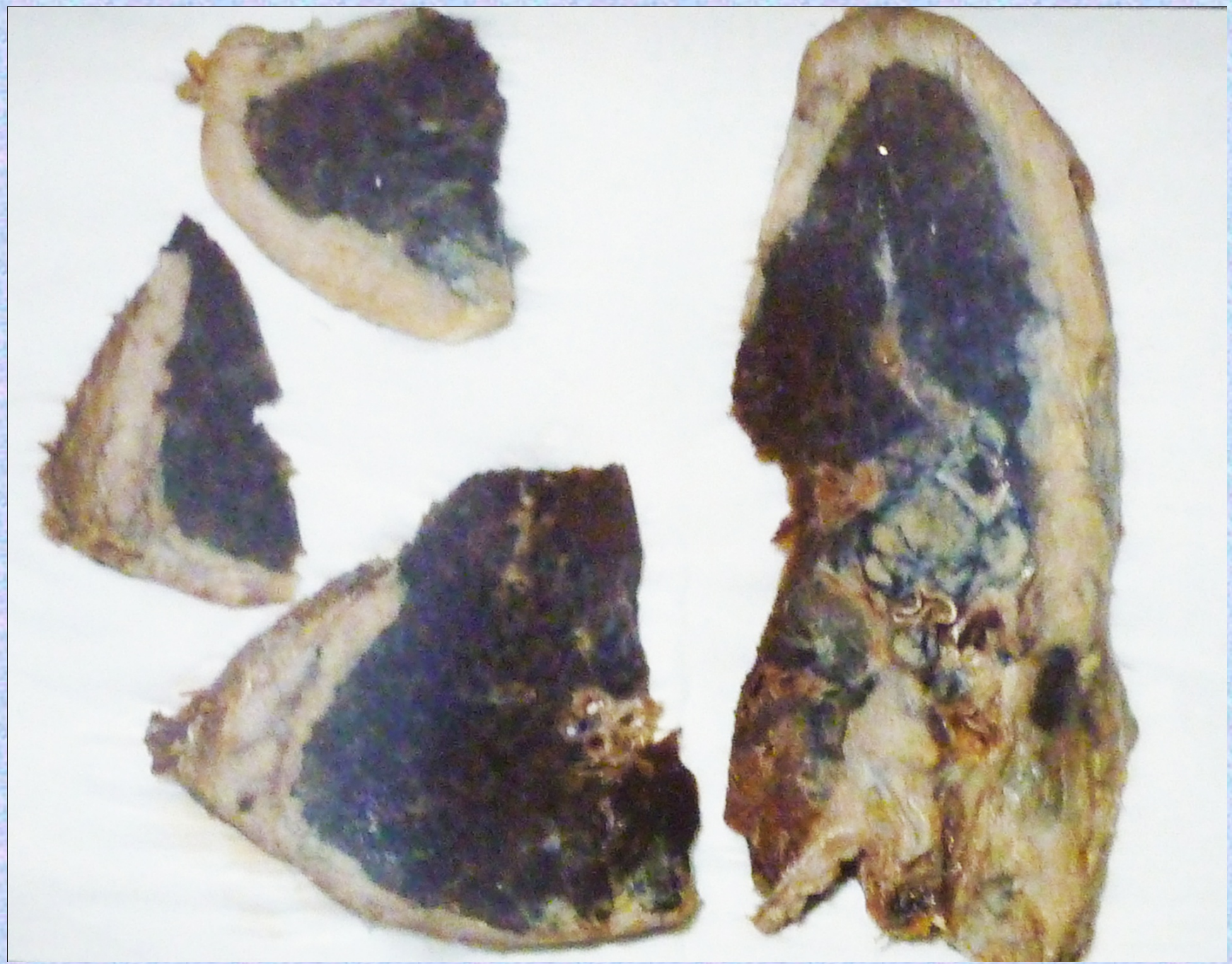
Asbestfibre migrerer av respirasjon- bevegelser?

Asbestfibre

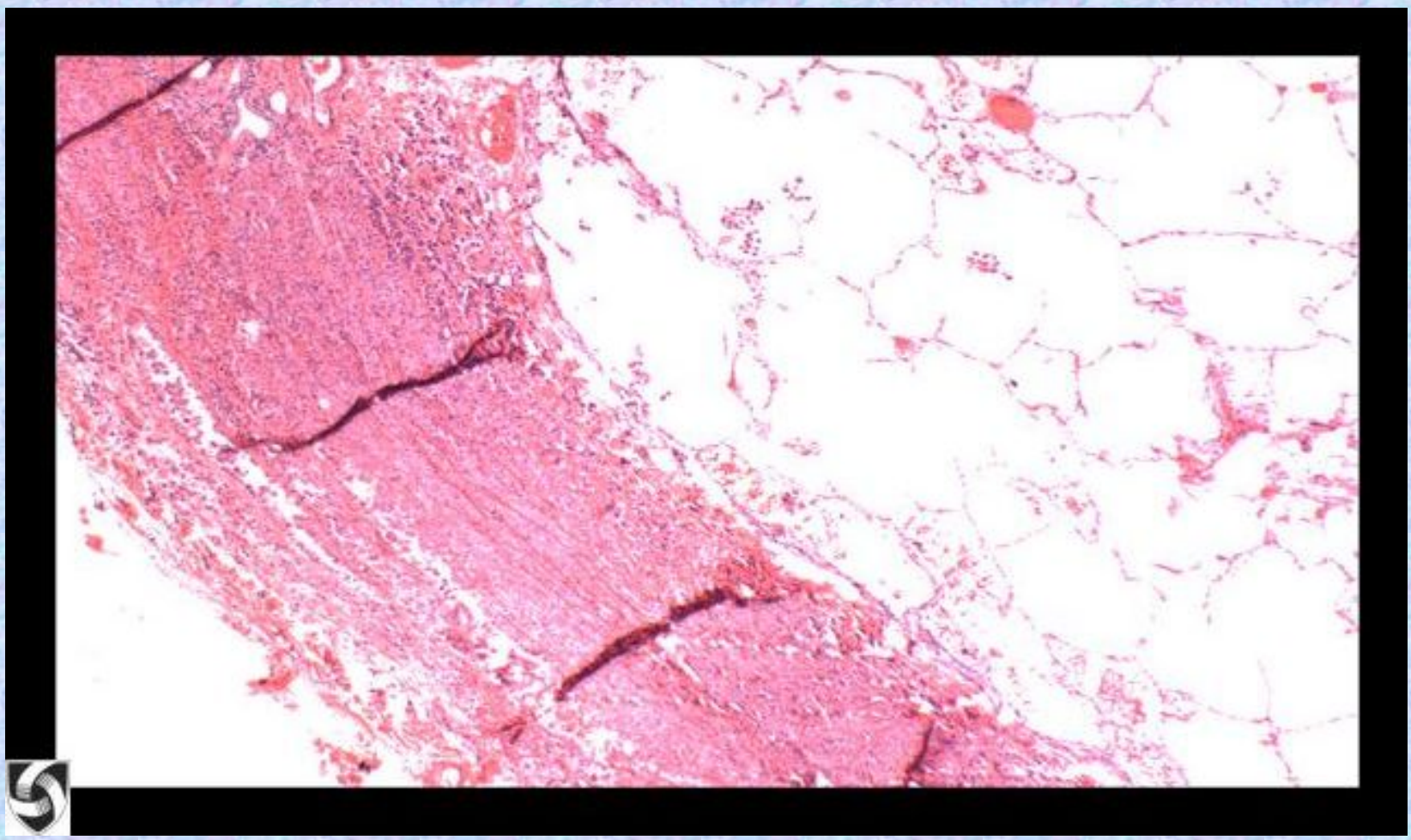
Uvanlig i plauraplaque

Sjelden i mesotheliom

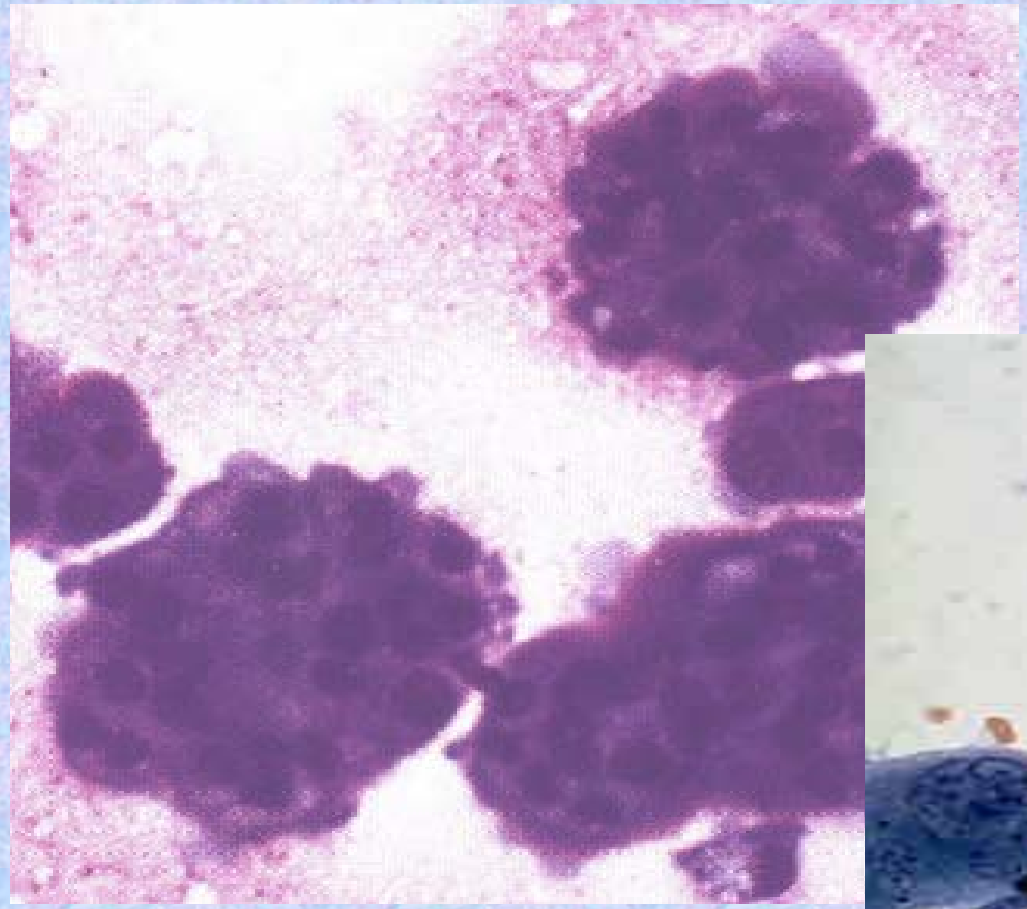

Pleural Mesothelioma
Healthy Lung
Diseased Lung
visceral pleura
parietal pleura
lung
pleural space
diaphragm
visceral pleura
parietal pleura
lung
pleural space
cancer
diaphragm



Pathology Low Power



Cytologi



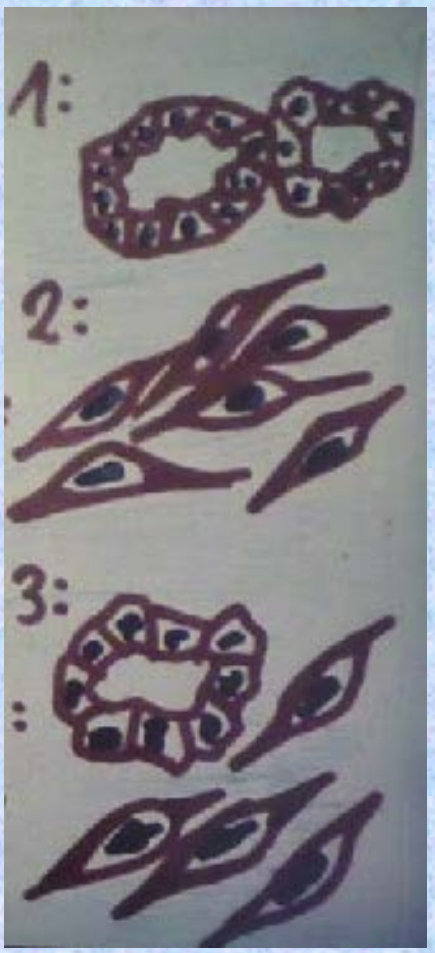
Hovedtyper:

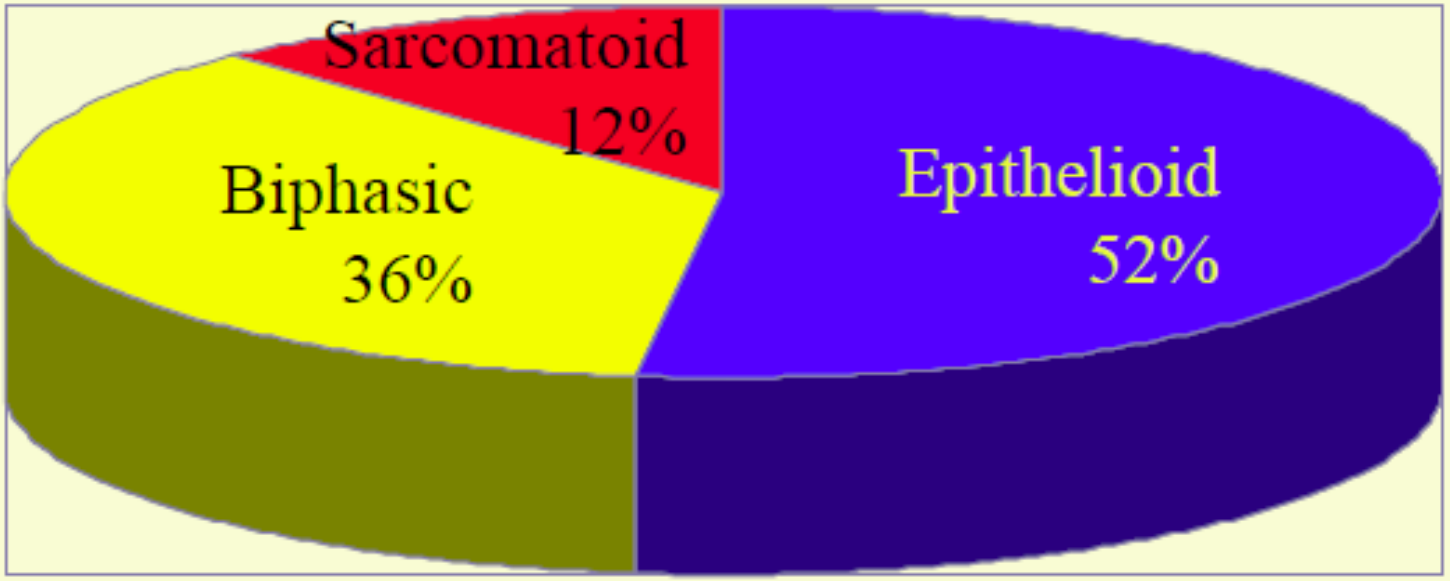
1 Monofasisk epitel

2 Monofasisk sarkomatøs

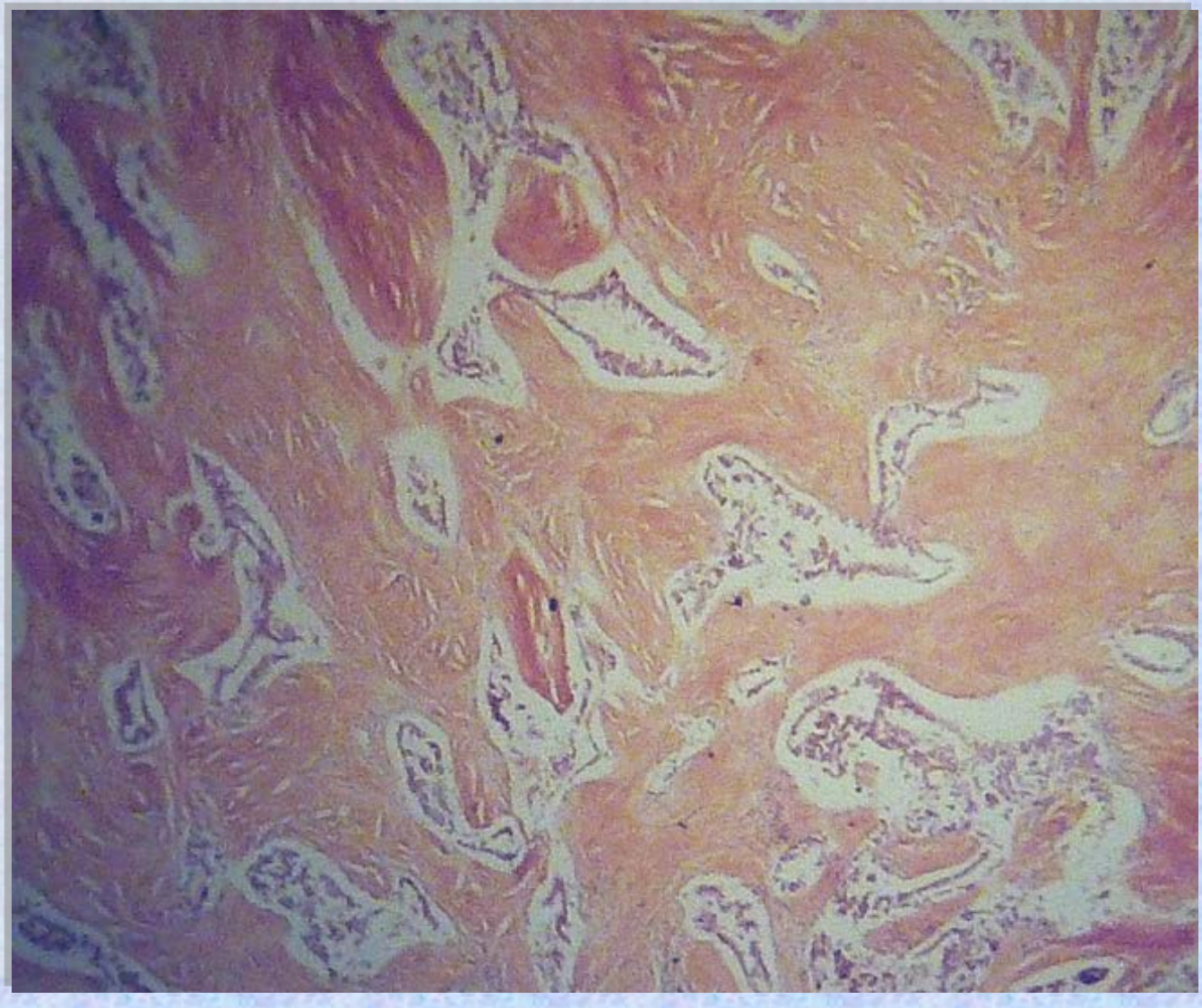
3 Bifasisk=

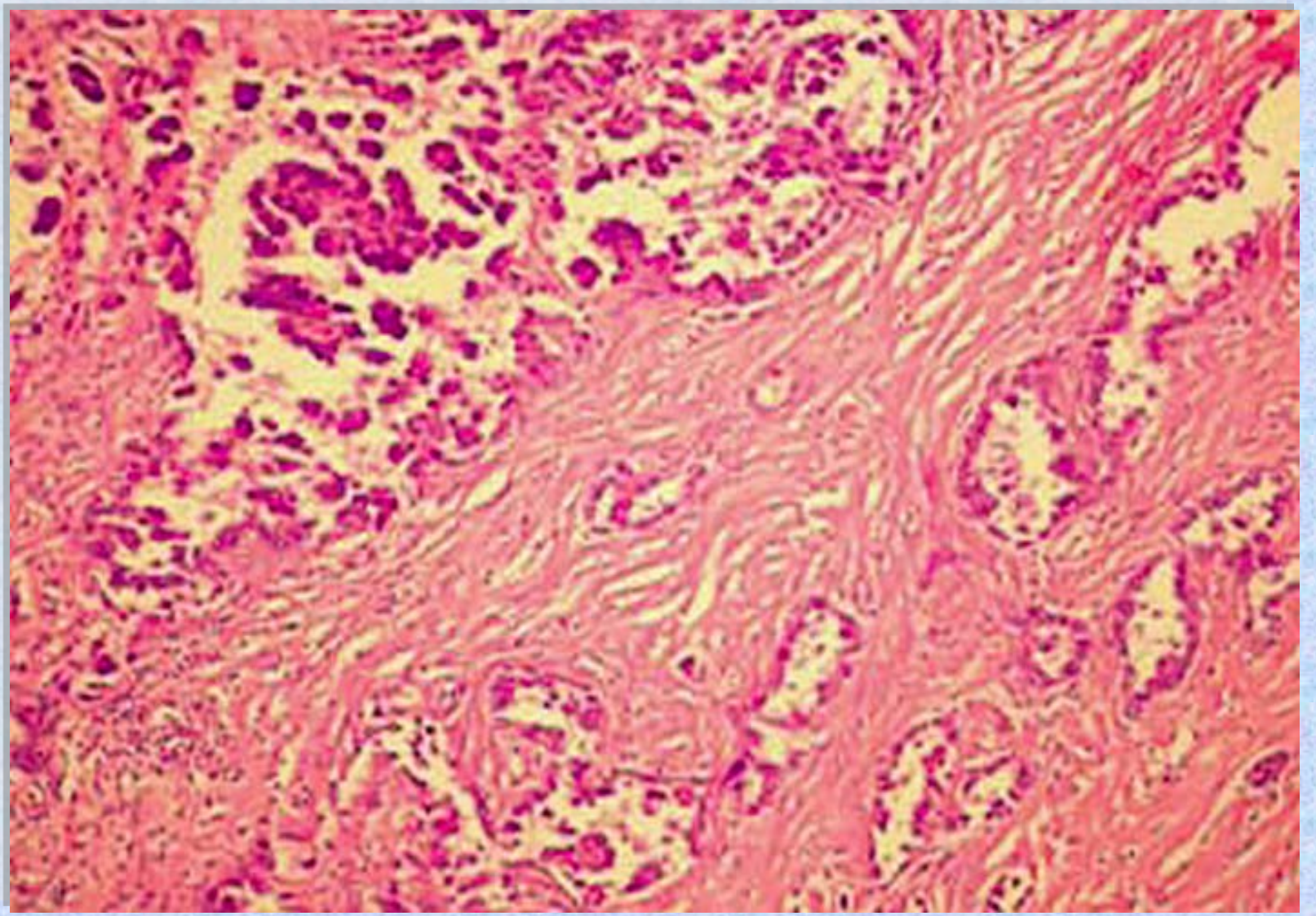
Blandet epitel/ sarkomatøs



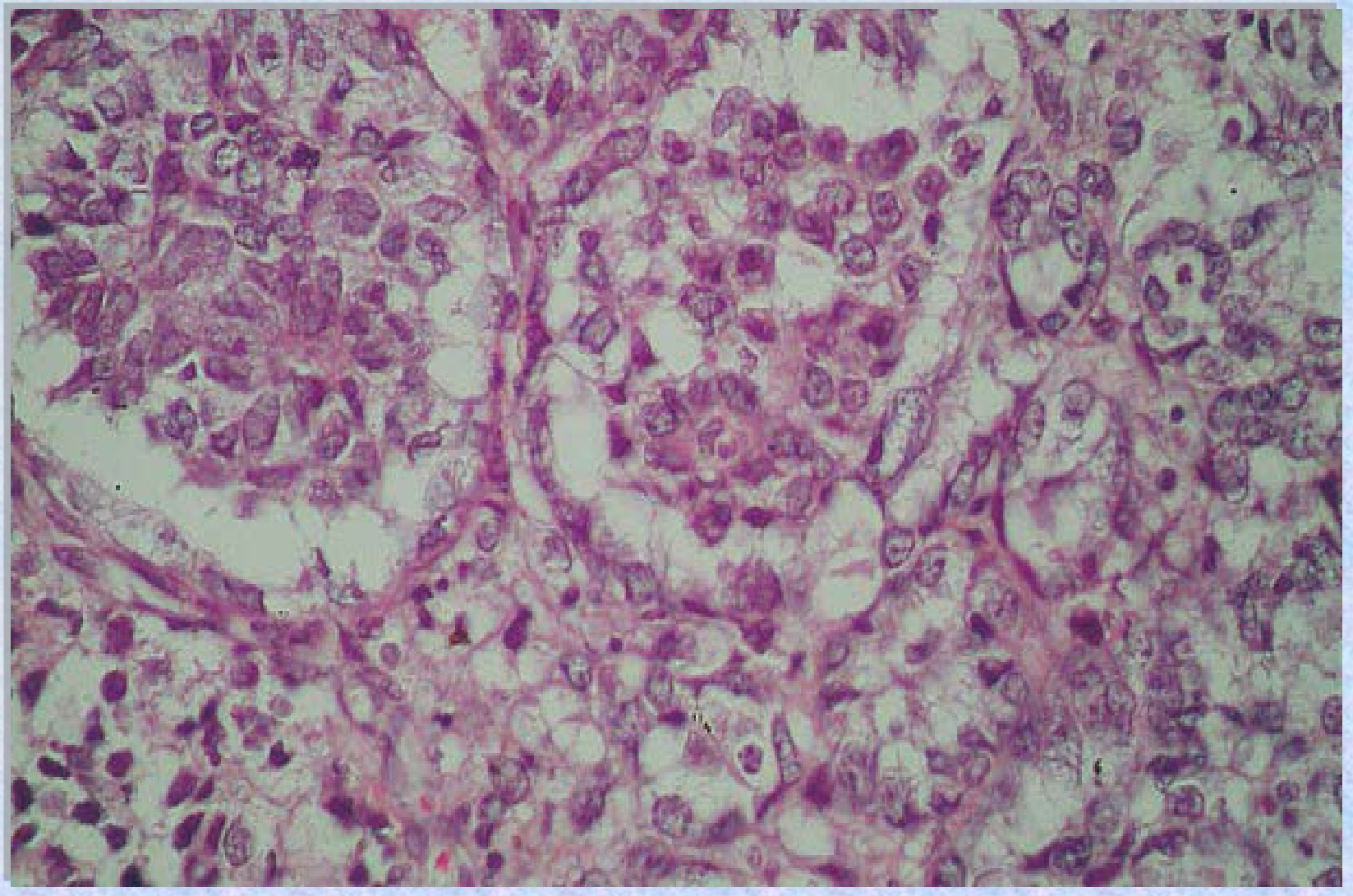


Epithelioid
Sarcomatoid
Biphasic (mixed)

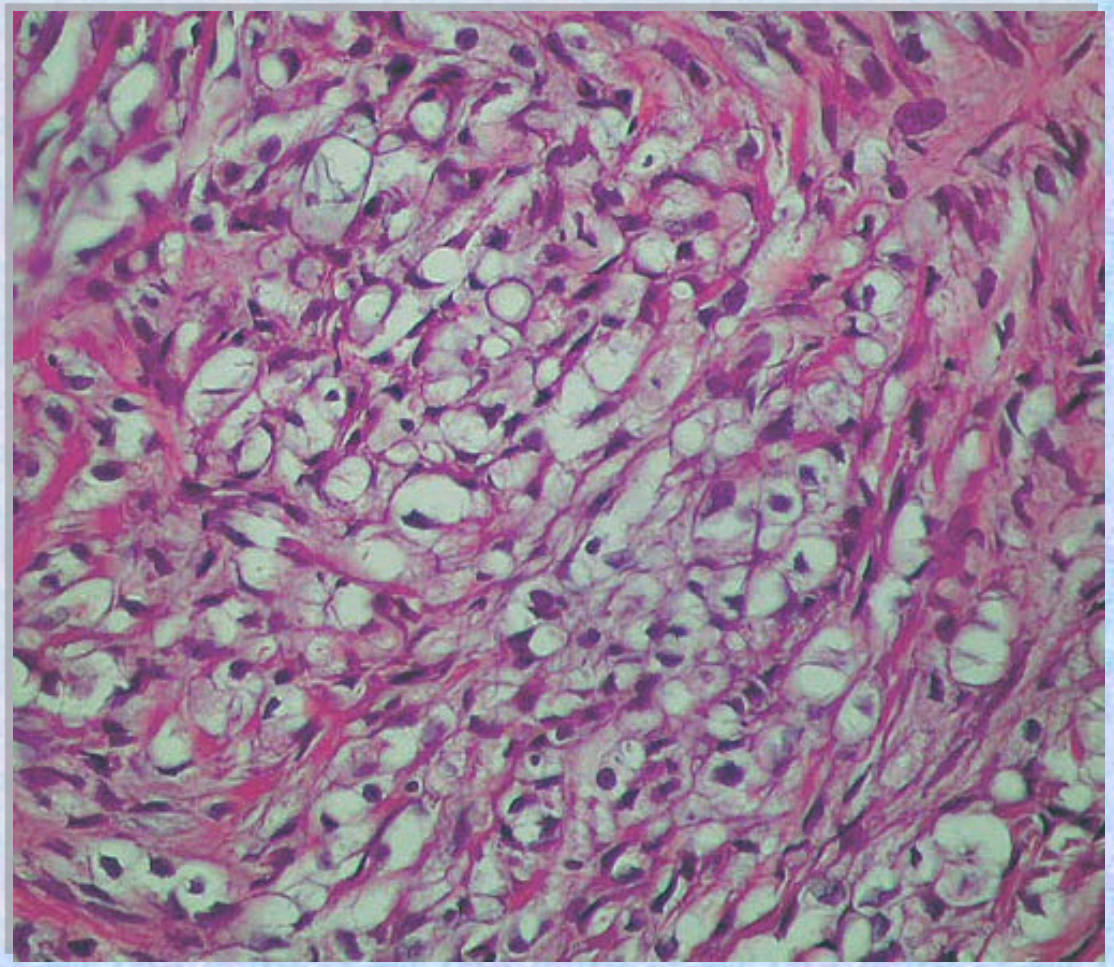




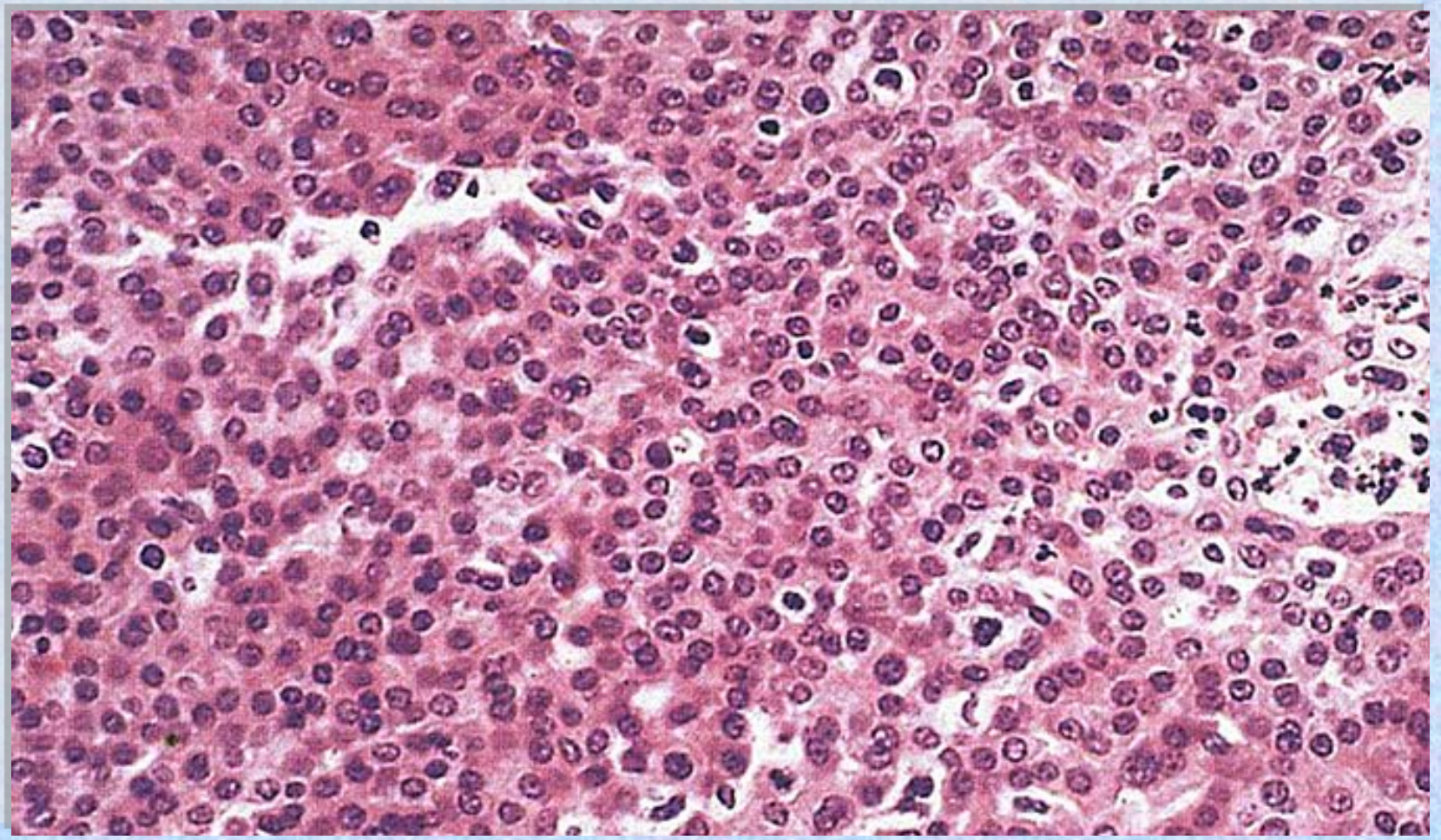
Tubulopapillært



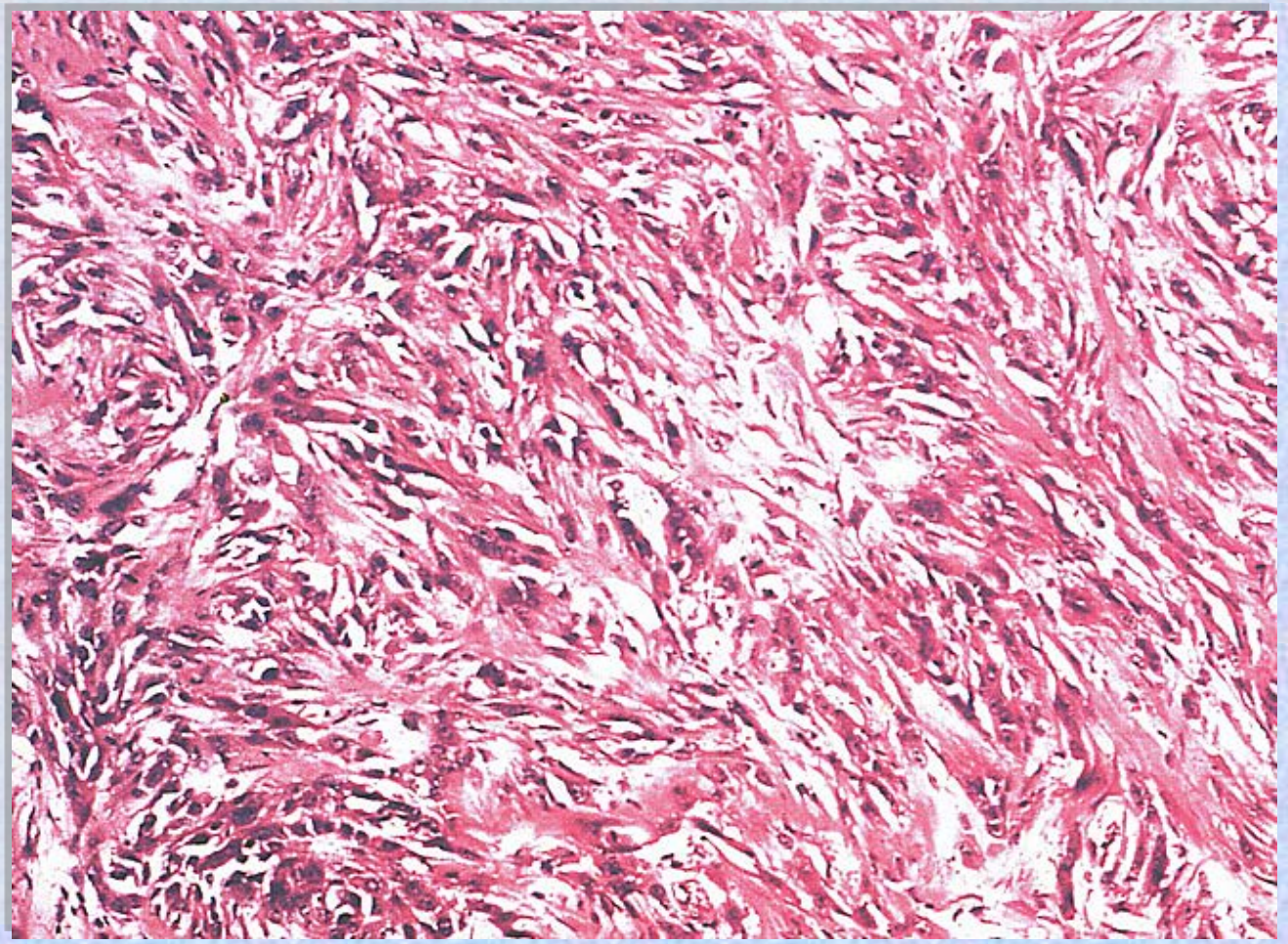
Signet ring



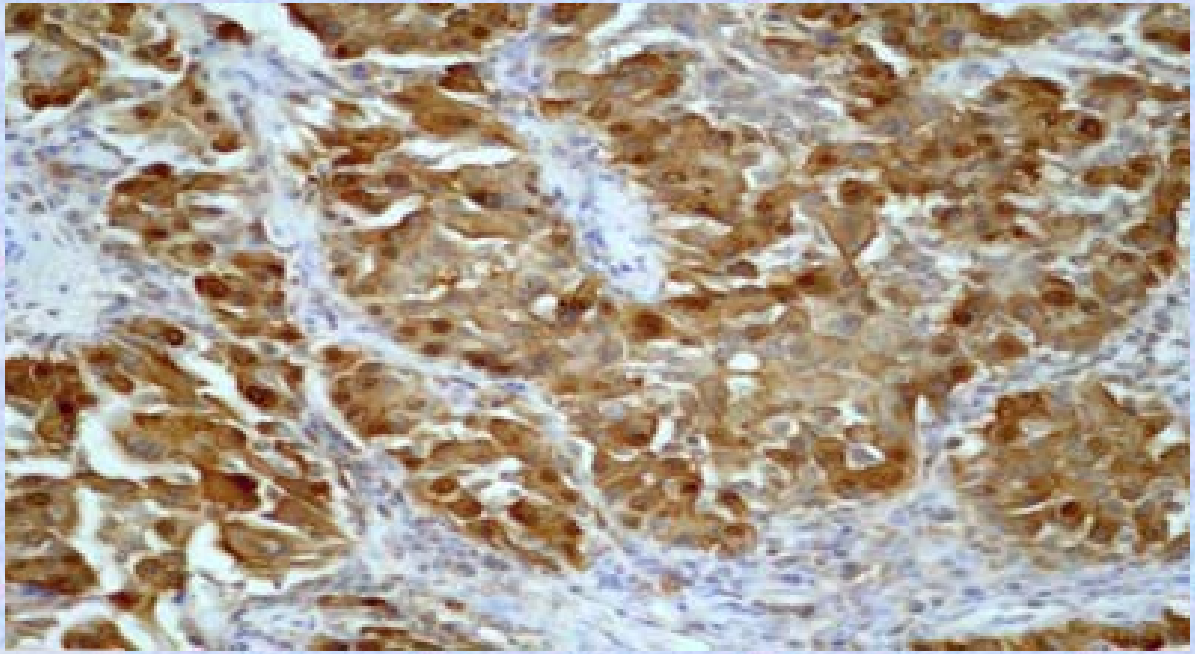
Småcellet

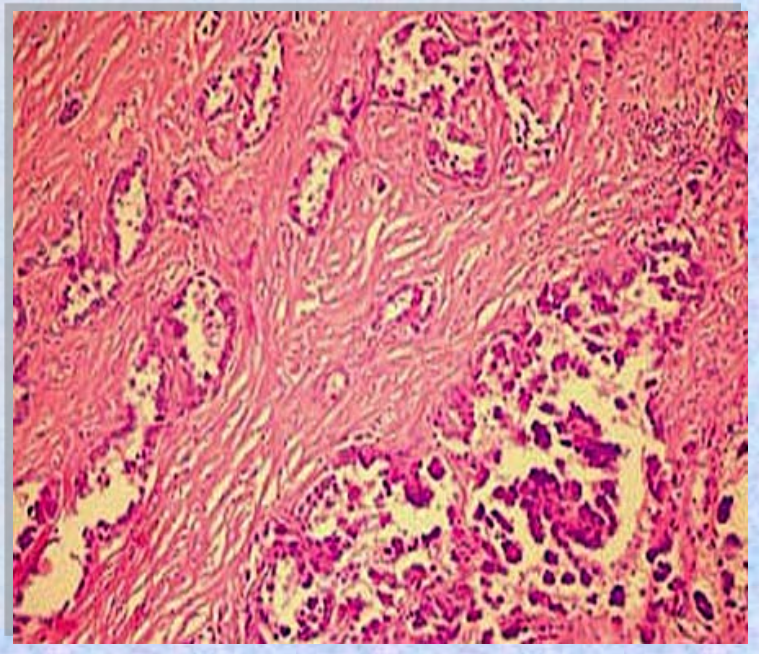


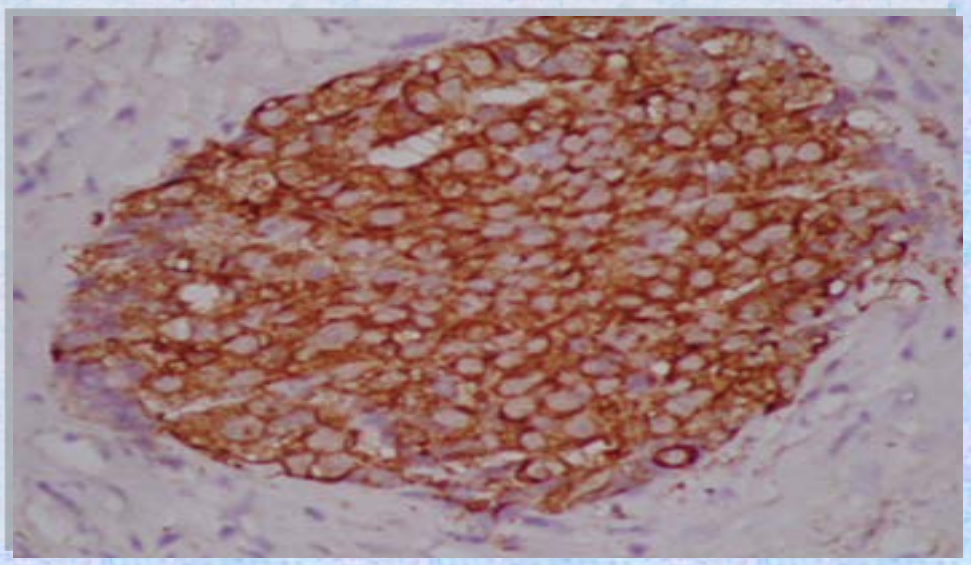
Sarkomatoid



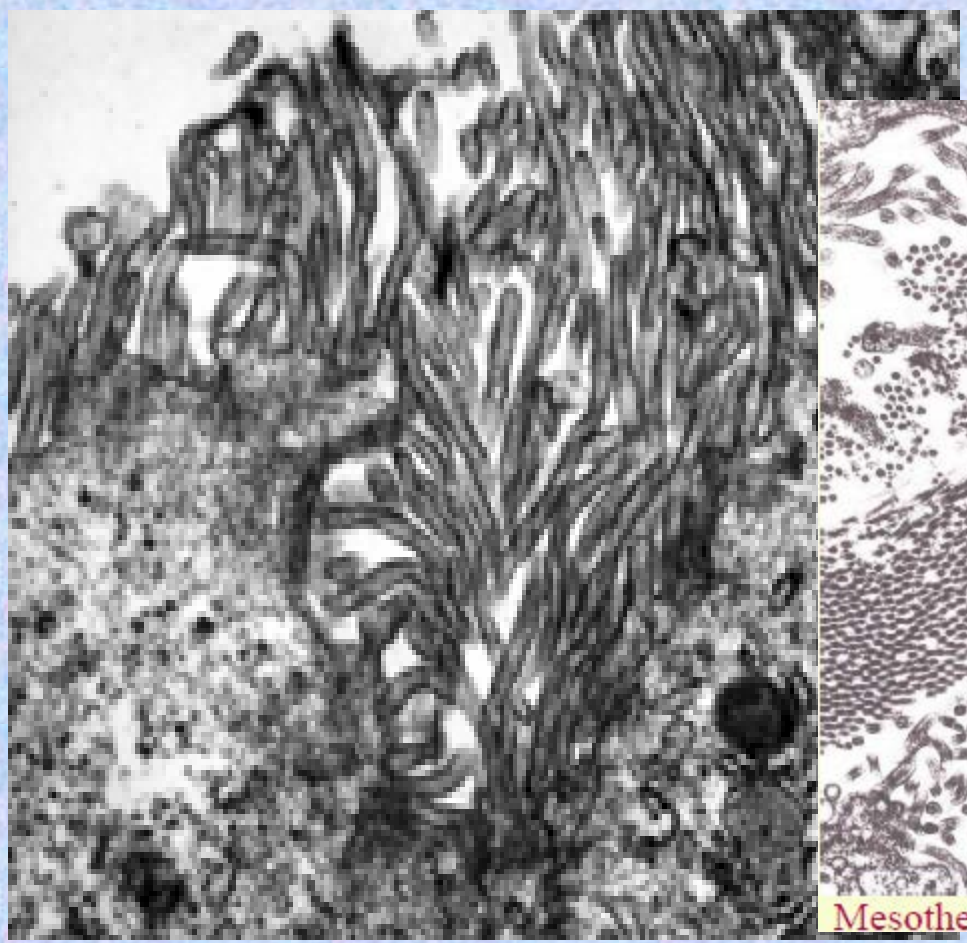
Calretinin

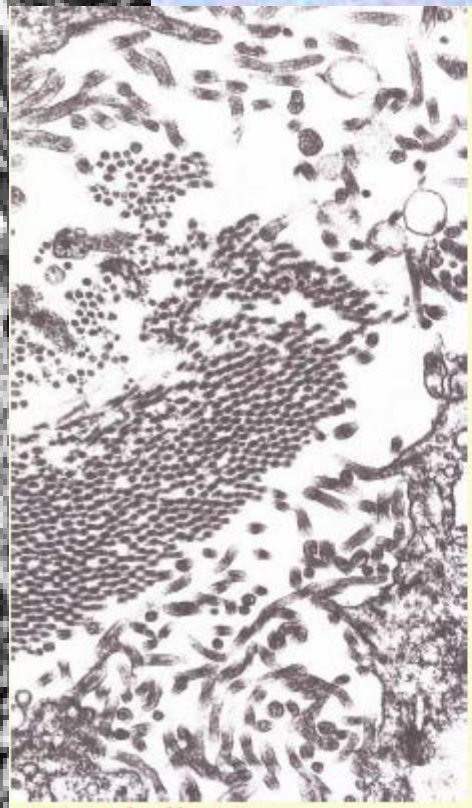




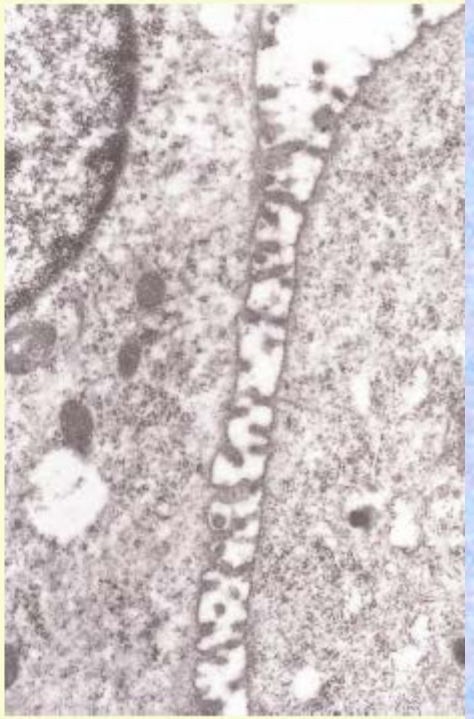


EL: Lange, slanke microvilli





Mesothelioma



Adenocarcinoma

DD

Sarkomatoid type V andre sarkomer

fibrose

lokalisert fibrøs tumor

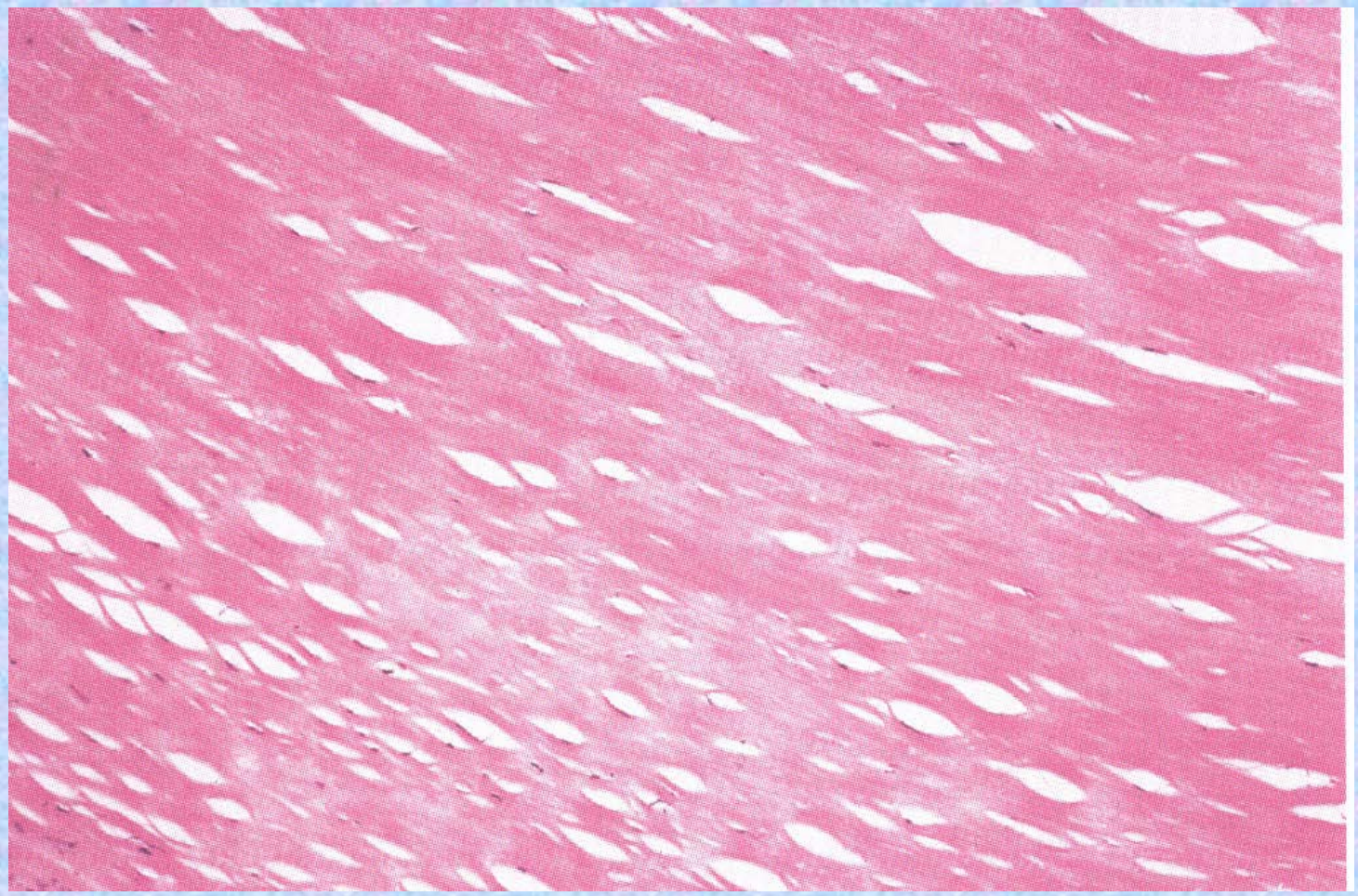
Mesotheliom V adenokarsinom

Mesotheliom V reaktive mesothel

Bifasisk V synovial tumor,

carcinoma-sarcoma

Arr, fibrose. Plaque



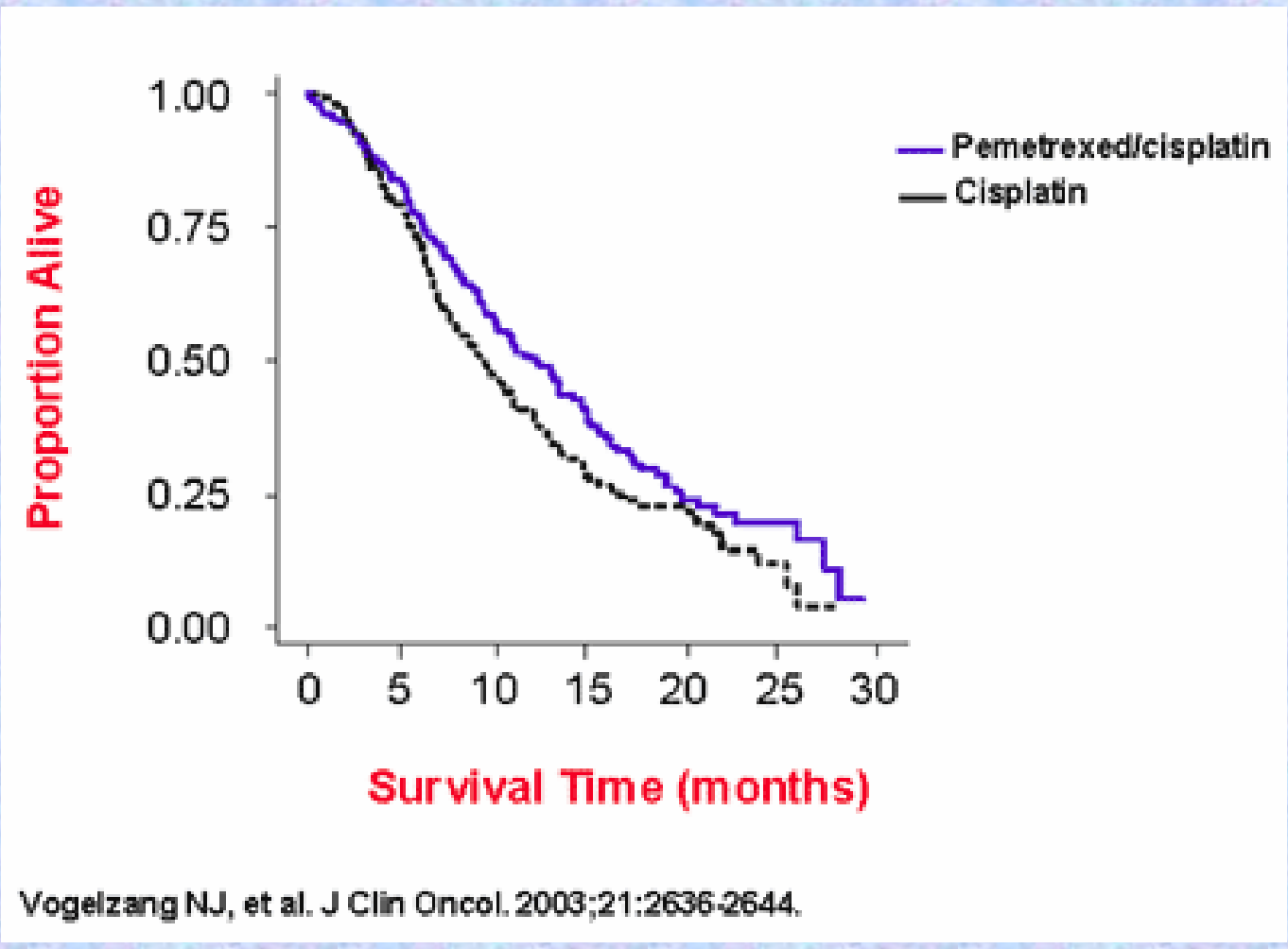
Immunhistokjemi

Pos.: **Calretinin**, AE1/AE3 Cytokeratin
EMA,WT1, 5/6, HBME-1, Mesothelin

Neg.: CEA, TTF-1, BG8

EM mikroskopi

Ca. 50% dør < 1 år etter diagnosen
Ca. 10% lever > 5 år



Vogelzang NJ, et al. J Clin Oncol. 2003;21:2636-2644.

Behandling:

Kir.,Rtg.,Med.,Immun.,Gen, ---dårlig

"I have never seen a patient with (a histologically secure diagnosis of) malignant mesothelioma who has been cured……"

Unngå asbest!

”Hvis det er mistanke om en slik årsakssammenheng, kan det fremmes krav om yrkesskadetrygd og -erstatning på lokale trygdekontor”. (”Før mors”)

Kirurgisk skandinavisk senter i Danmark.
Kan henvise pasienter!