CHAPTER II

ANATOMY

The greater part of the pancreas in man lies in the

into the left hypochondrium, and the head may project into the umbilical region.

To expose the organ from the front the stomach must be detached [illegible] turned upwards. It is then seen as a long, pinkish, cream-coloured gland, stretching transversely across the posterior abdominal wall [illegible] to the lower and inner border of the spleen. In the fresh condition it has a finely lobulated appearance. In length it varies from 5 to 6 inches (12 to 15 cm.). Its average weight ranges from 2.25 to 3.5 ounces (66 to 102 grams). The general shape of the gland is [illegible] Cunningham's "Text-book of Anatomy"), [illegible] upon its side, ⌐, the loop being thickened to represent the head, the thickened stem corresponding to the body, and the narrow bend joining the two indicating the neck.

[illegible] extends downwards and to the left, lying in the concavity of the duodenum in contact with its second and third parts, and opposite to the second and, upper part of, the third lumbar vertebra. The short and comparatively narrow portion of the gland termed [illegible] arises from the upper and right part of the head. It runs upwards and to the left, [illegible] inch, merges into the "body." This, which is the longest section of the gland, runs backwards and to the left at the level of

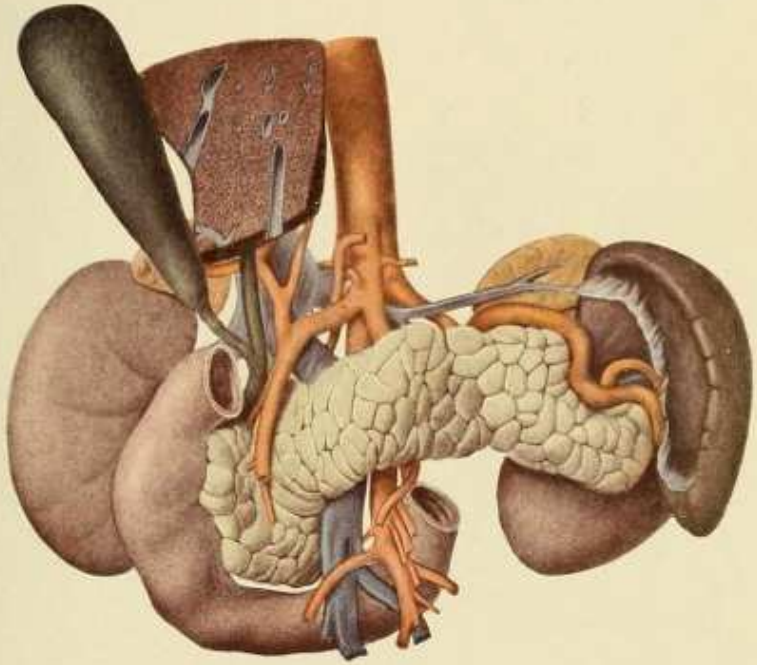
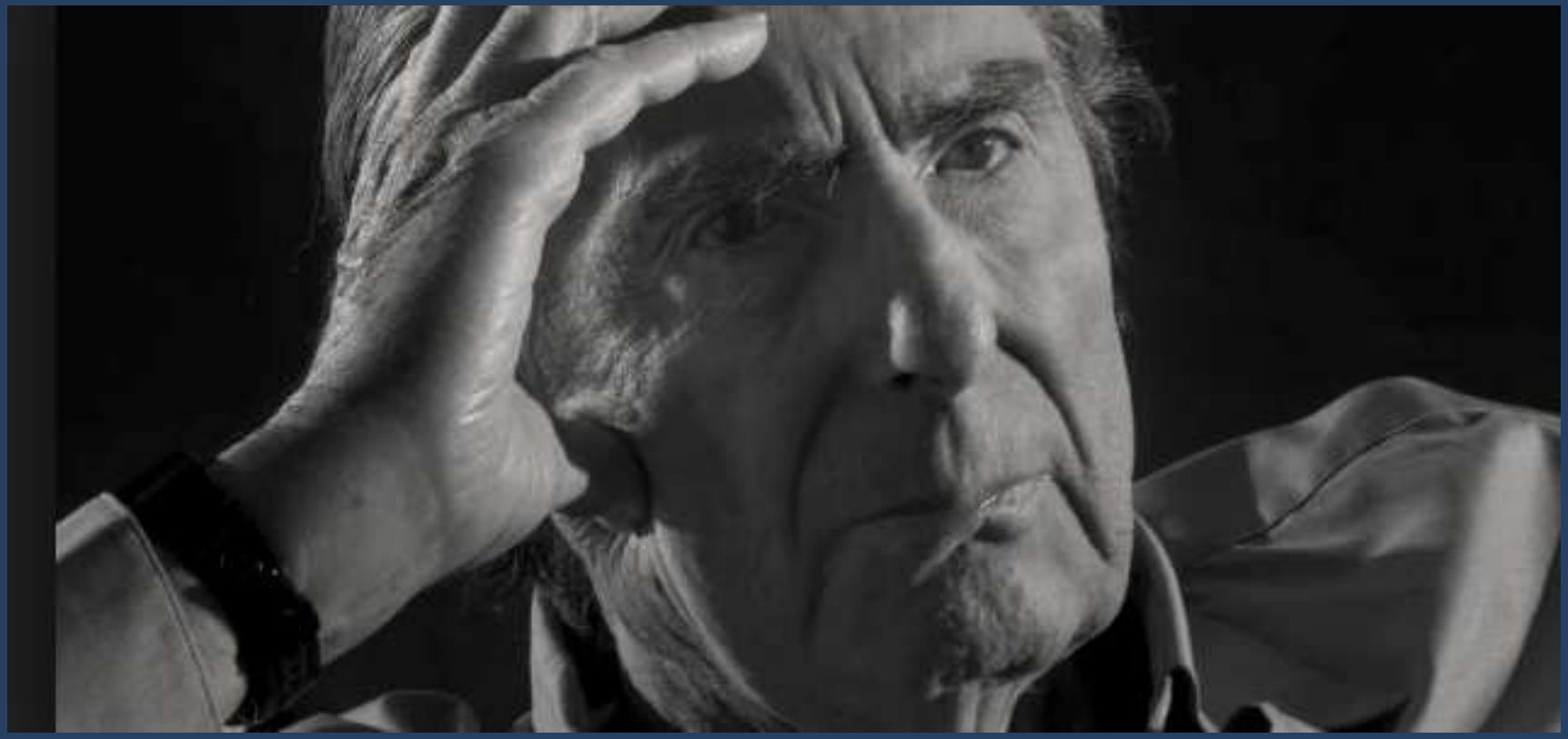


Fig. 10.—Relations of the pancreas (Sobotta and McMurrich).

Indicazioni, limiti ed incognite della CHIRURGIA COMPLESSA dei tumori del distretto EPATOBILIARE & PANCREATICO

a cura di

Giancarlo Pansini



”Devo anche calcolare cosa succede se non facciamo niente. Il chirurgo mi assicura che peggiorerà in brevissimo tempo. Però io non voglio fargli subire un’operazione senza un valido motivo.”

P. Roth
1991, Patrimonio. Una storia vera

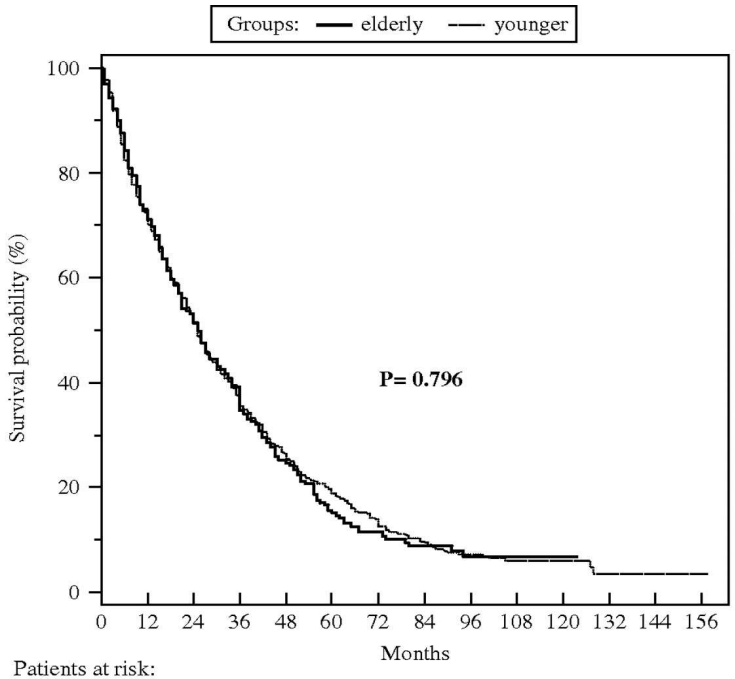
Treatments for hepatocellular carcinoma in elderly patients are as effective as in younger patients: a 20-year multicenter experience.
***F. Mirici-Cappa,* for the Italian Liver Cancer Group, GUT | 2010 | 59:387**

What are the key points?

Retrospective multicentre cohort study (614 elderly + 1104 younger unselected patients)

Elderly patients are more frequently treated with percutaneous ablation
Elderly patients are less frequently treated with liver resection or TACE
The life expectancy is unaffected by age >|= 70years
Patient survival is unaffected by age in each treatment subgroup
Cancer stage predicts patient outcome in all therapeutic subsets

Treatments for hepatocellular carcinoma in elderly patients are as effective as in younger patients: a 20-year multicenter experience.
F. Mirici-Cappa*, for the Italian Liver Cancer Group,* GUT | 2010 | 59:387

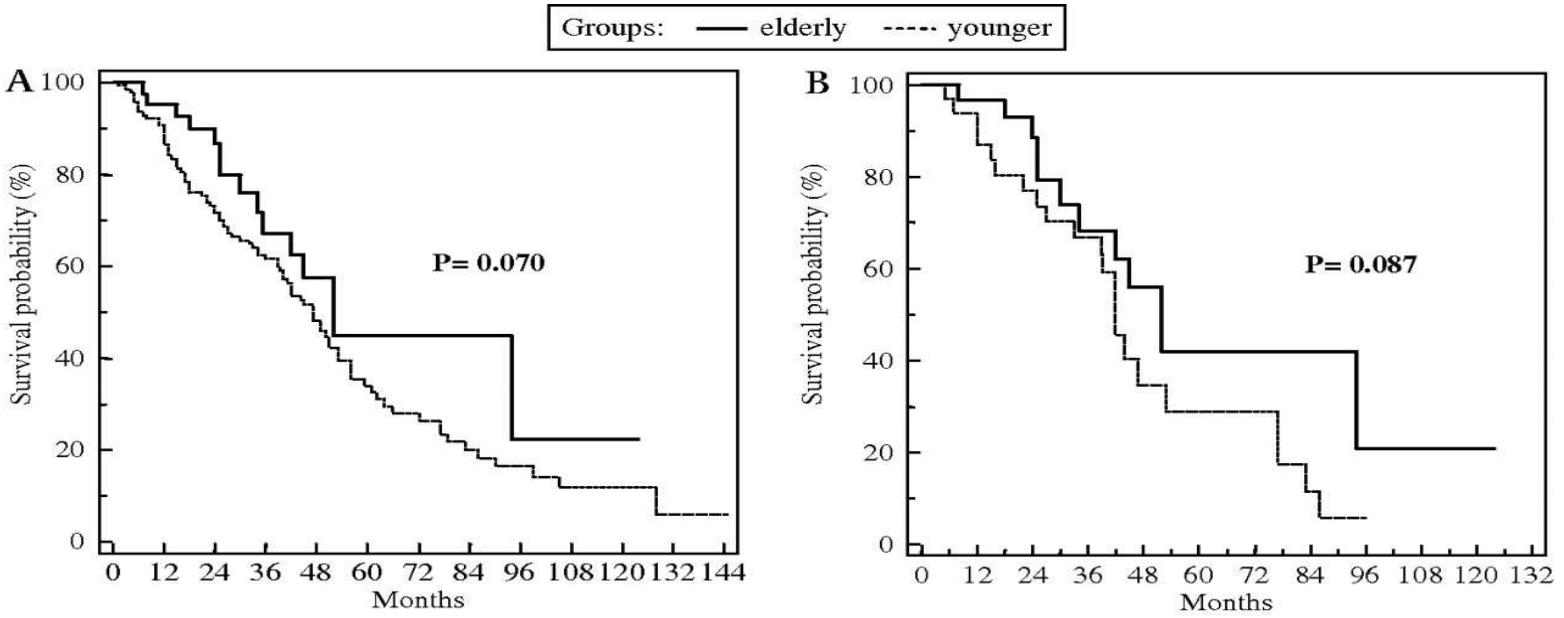


Patients at risk:

Months	0	12	24	36	48	60	72	84	96	108	120
Elderly	614	394	245	147	74	33	18	13	6	4	2
Younger	1104	737	491	307	182	104	63	35	22	10	8

Figure 1 . Overal survival of unselected elderly and younger patients

Treatments for hepatocellular carcinoma in elderly patients are as effective as in younger patients: a 20-year multicenter experience.
***F. Mirici-Cappa, for the Italian Liver Cancer Group,* GUT | 2010 | 59:387**



Patients at risk:

Months	0	12	24	36	48	60	72	84	96	108	120
Elderly	43	39	28	15	10	6	6	5	1	1	1
Younger	142	125	98	76	42	24	18	12	9	4	3

Months	0	12	24	36	48	60	72	84	96	108
Elderly	32	29	21	12	9	5	5	5	1	0
Younger	32	28	23	19	6	5	5	2	1	0

Figure 2 . Overal survival of elderly and younger patients treated with hepatic resection before (A) and after (B) matching with the propensity analysis.

Hepatocellular carcinoma in elderly: Meta-analysis and systematic literature review. *A.K. Hung,* World J Gastroenterol | 2015 | 21:12197

Innovations and breakthroughs

Based on this meta-analysis, **elderly patients with hepatocellular carcinoma have similar outcomes compared to non-elderly patients**. Specifically, they have similar 3-year survival after resection and ablation and an improved 3-year survival after TACE, compared to non-elderly patients. **At 5-year, elderly patients had a lower survival after ablation but similar survival with resection** and TACE as compared to younger patients. Heterogeneity of patient populations and selection bias can explain some of these findings.

Hepatocellular carcinoma in elderly: Meta-analysis and systematic literature review. *A.K. Hung,* World J Gastroenterol | 2015 | 21:12197

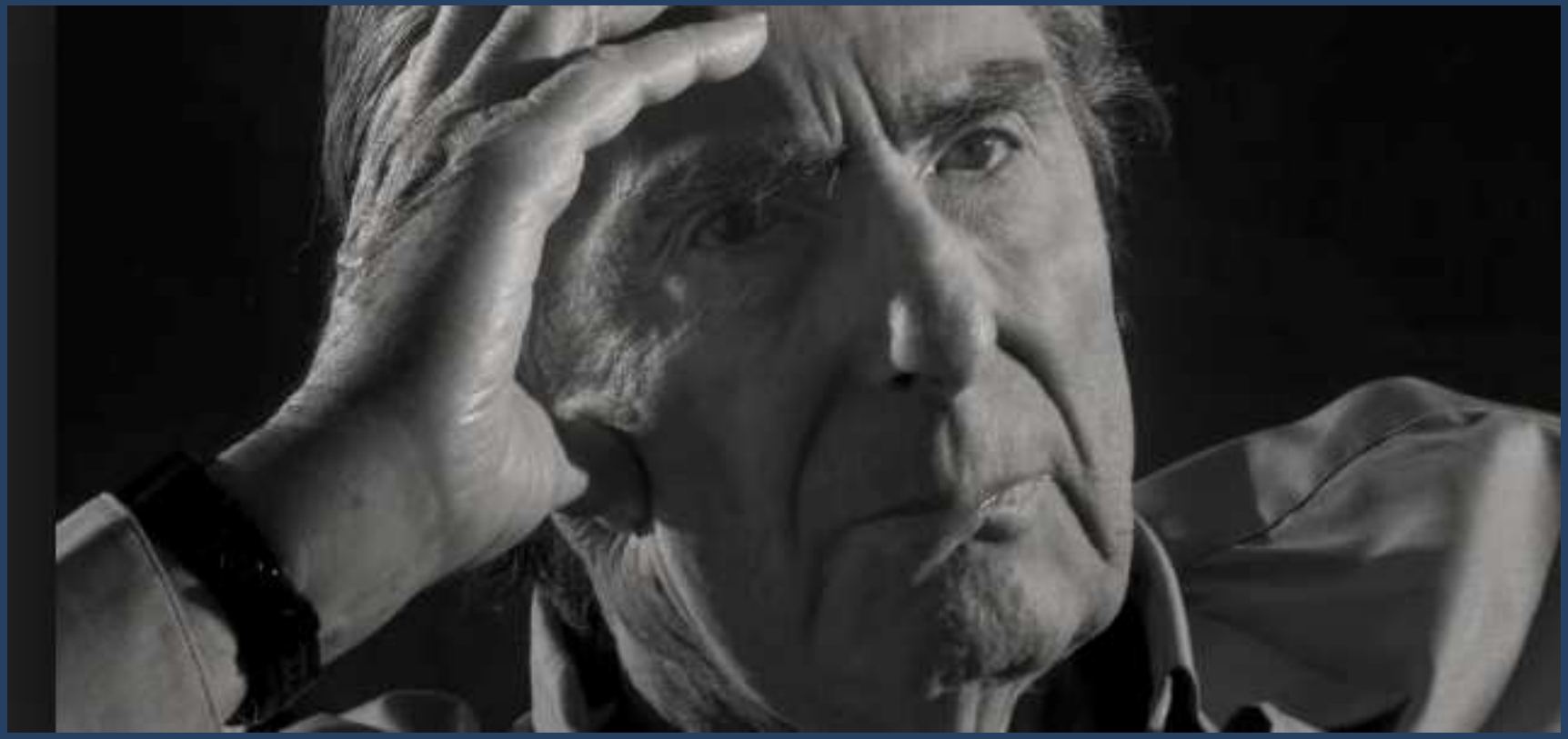
Applications

The findings from this meta-analysis can be used to guide the treatment approach of elderly patients with hepatocellular carcinoma. The analysis included clinical outcomes of locoregional therapies including surgical resection, chemoembolization, and radiofrequency ablation. **Overall, elderly patients have good success with these treatments and should be considered for all treatments after assessment of their clinical status and cancer burden**.

Effects of age on survival in patients undergoing resection of epatocellular carcinoma. *A. Cucchetti,* British J Surg | 2016 | 103:93-99

Results & implications for *Clinical Practice*

Consecutive 919 patients with liver cirrhosis and HCC who underwent hepatectomy were divided into age quartiles for analysis. **Postoperative mortality rates were similar** between age quartiles, as were survival rates up to 3 years. A statistically significant reduction in 5–10-year survival rates was observed with ageing. Although survival after liver resection for HCC is shortest in elderly patients, **hepatic resection in the elderly can provide a survival benefit at reasonable costs.** The elderly candidates for surgery are selected carefully.



“Però io non voglio fargli subire un’operazione senza un valido motivo. Sarebbe una fatica del diavolo riprendersi da un intervento come questo a quarant’anni; ad ottanta, è impensabile, no? Operare sarebbe l’inizio di un orrorre, e non operare l’inizio di un orrore diverso.”

P. Roth

1991, Patrimonio. Una storia vera

Management and Outcome of Colorectal Cancer Liver Metastases in Elderly Patients: a Population-based Study. *C.M, Booth,* JAMA | Oncol 2015 | 1(8):1111-1119

Conclusions and Relevance

Current demographics trends will lead to an increasing number of elderly patients presenting with potentially resectable CRLM. Resection of CRCLM is associated with greater risk of postoperative mortality among elederly patients despite less aggressive treatment. Although the long-term outcome are inferior to younger patients, a substantial proportion of elderly patients will have long term survival (28% to 35%).

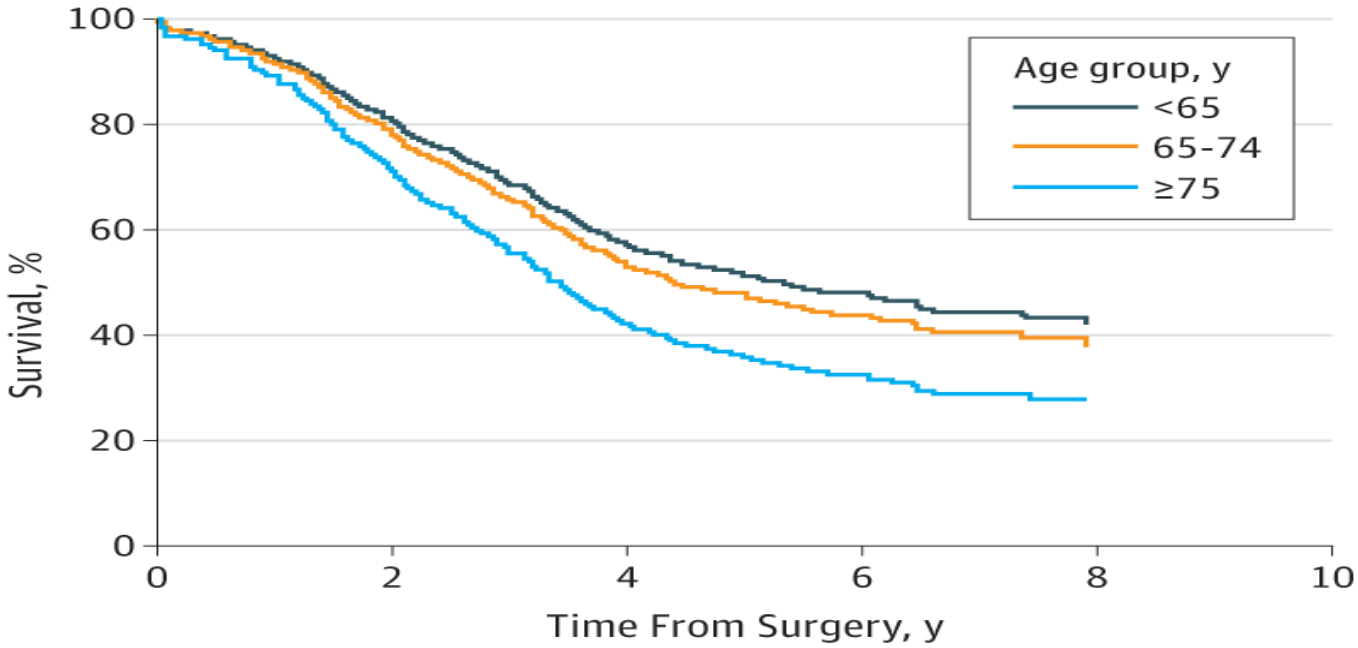
Management and Outcome of Colorectal Cancer Liver Metastases in Elderly Patients: a Population-based Study. *C.M, Booth,* JAMA | Oncol 2015 | 1(8):1111-1119

Table 2. Short- and Long-term Outcomes for All Patients

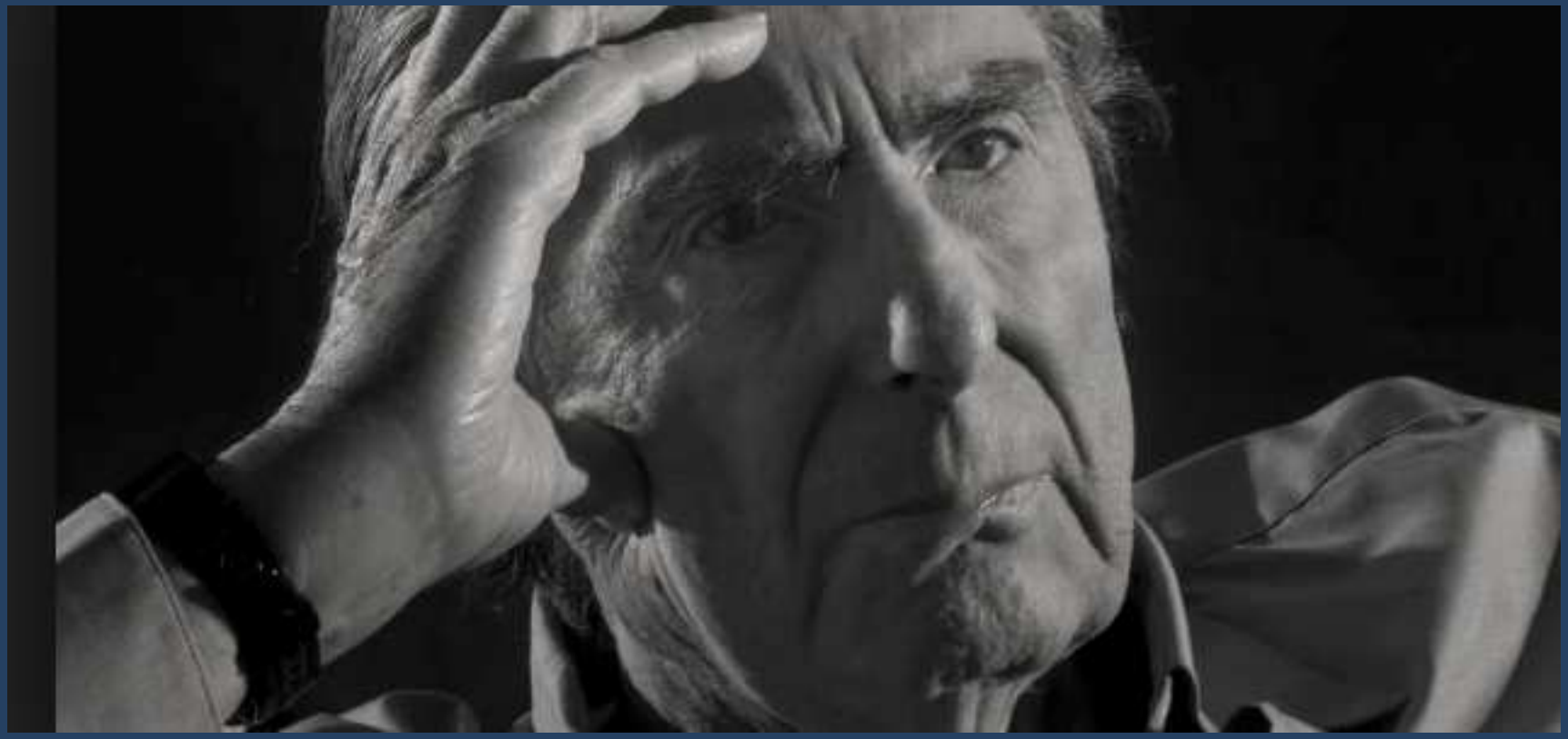
Characteristic	All Patients (n = 1310)	Patient Age, y			*P* Value[a]
		<65 (n = 710)	65-74 (n = 414)	≥75 (n = 186)	
Short-term outcomes, No. (%)					
Median LOS	7	7	8	9	<.001
30-Day mortality	29 (2)	8 (1)	12 (3)	9 (5)	.005
90-Day mortality	45 (3)	11 (2)	20 (5)	14 (8)	<.001
30-Day readmission[b]	165 (13)	66 (9)	65 (16)	34 (18)	<.001
90-Day readmission[b]	258 (20)	113 (16)	91 (22)	54 (29)	<.001
Long-term outcomes, % (95% CI)					
5-Year OS	44 (41-47)	49 (45-53)	44 (39-49)	28 (21-35)	<.001
10-Year OS	29 (25-33)	35 (30-41)	23 (14-34)	16 (9-24)	<.001
5-Year CSS	46 (43-50)	49 (44-53)	47 (40-53)	35 (27-44)	<.001
10-Year CSS	NA	NA	NA	NA	

Management and Outcome of Colorectal Cancer Liver Metastases in Elderly Patients: a Population-based Study. *C.M, Booth,* JAMA | Oncol 2015 | 1(8):1111-1119

Adjusted cancer-specific survival (CCS)



Age group, y						
≥75	186	95	40	16	<6	0
65-74	414	245	103	36	6	0
<65	710	489	210	82	17	0



“Ai danni del tumore non si può rimediare. L’operazione, come la vedo io, eviterà ulteriori conseguenze _ a meno che non fosse l’operazione stessa a causare una qualche ulteriore conseguenza…ma questo non lo dissi.”

P. Roth

1991, Patrimonio. Una storia vera

Bile Duct Carcinoma in the Elderly. A rationale for Surgical Management. *W. Longmire.* Arc Surg | 1991 | 126:433-435

What are the key points?

This study indicates that surgical management of bile duct tumors in elderly patients provides an opportunity for a definitive diagnosis, the best possible patient selection, improved long-term survival, and the only chance for cure. Moreover, bile duct tumors in a population of elderly patients can be managed surgically with relatively low mortality rates. **Therefore, we believe that elderly patients should not be denied surgical evaluation simply on the basis of age.**

Bile Duct Carcinoma in the Elderly. A rationale for Surgical Management. *W. Longmire.* Arc Surg | 1991 | 126:433-435

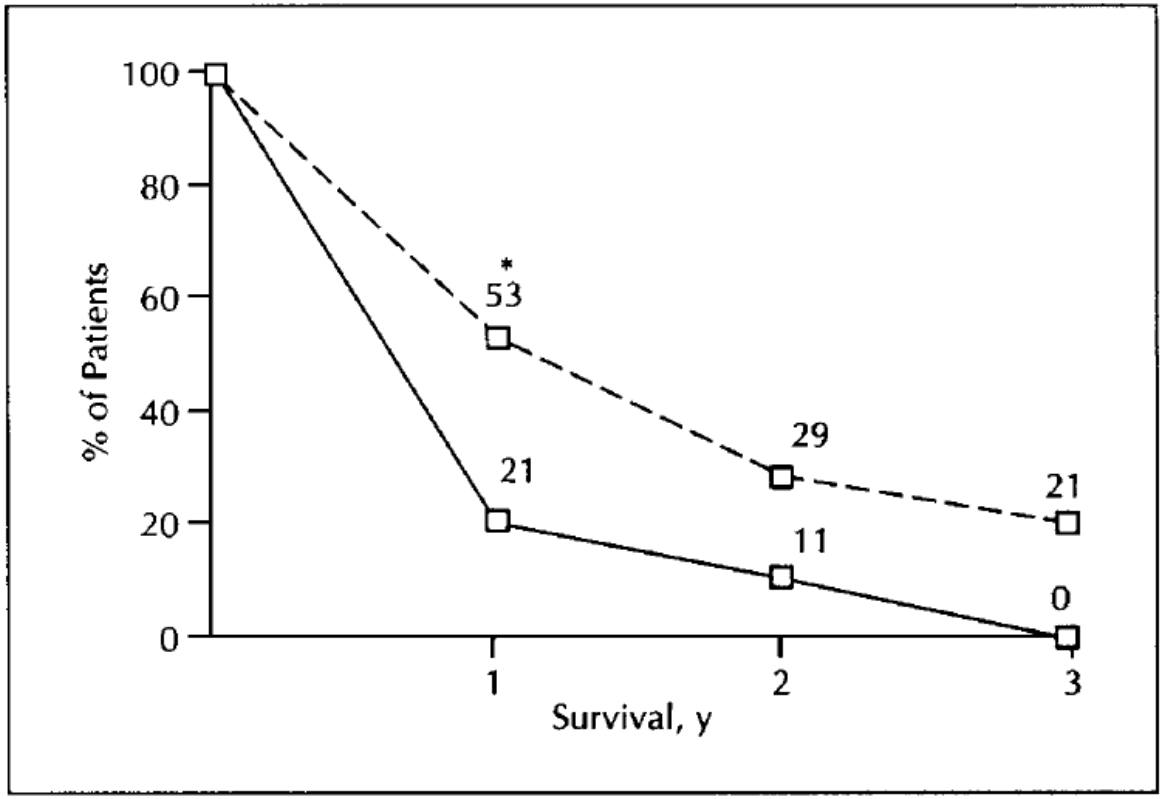


Fig 3.—*Comparison of the survival curves for elderly patients with bile duct cancer treated between 1954 and 1978 (group 1, solid line, n = 20) with those treated between 1979 and 1988 (group 2, broken line, n = 22). Asterisk indicates P<.05 (group 2 vs group 1).*

Patterns of care and treatment outcomes in older patients with biliary tract cancer. *A. Horgan.* Oncotarget | 2015 | 6:44995-45003

What are the key points?

Early stage disease (stage I/II) and ECOG PS < 2 were associated with surgical intervention and survival outcomes **did not differ between older and younger** patients (median survival 21.1 months in both group). Older patients with BTC are less likely to be offered chemotherapy compared to younger patients. Treatment decisions for BTC in older patients should thus not be guided solely by the biological age of the patient, and **active management** should be considered for this patient population if deemed appropriate following clinical assessment.

Patterns of care and treatment outcomes in older patients with biliary tract cancer. *A. Horgan.* Oncotarget | 2015 | 6:44995-45003

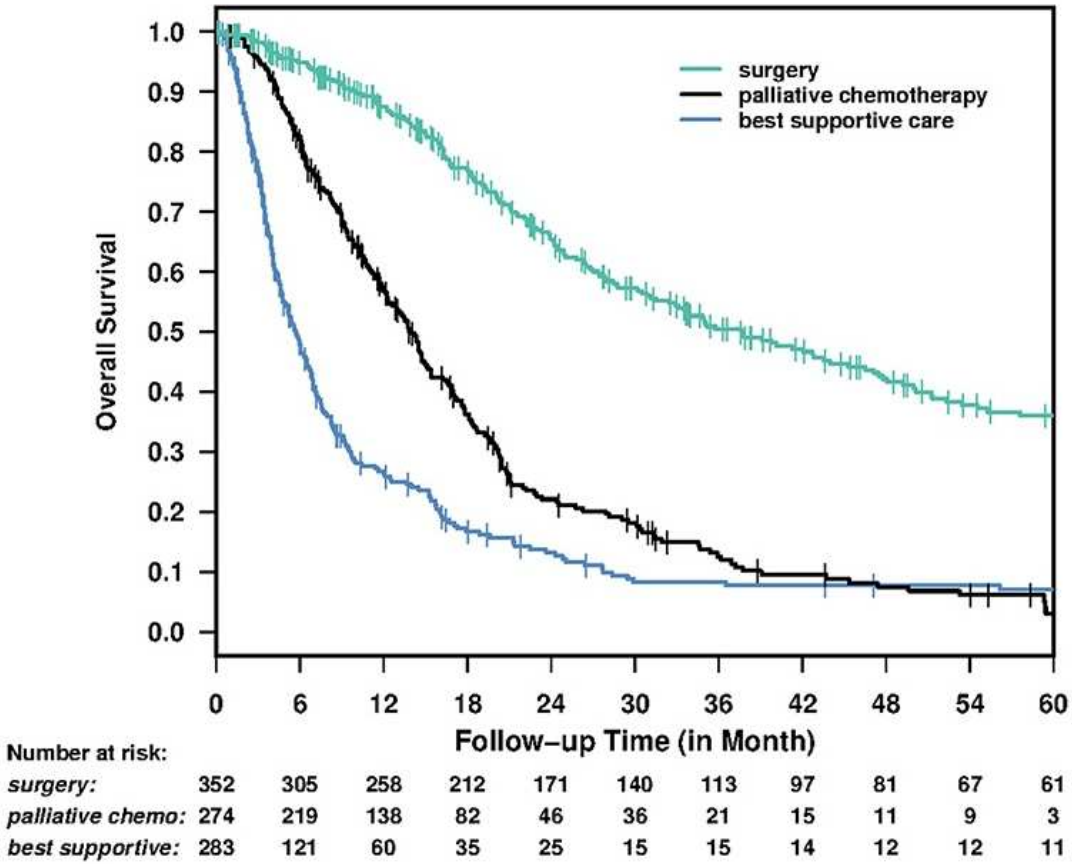


Figure 1 . Overal survival for all patients by treatment group

Patterns of care and treatment outcomes in older patients with biliary tract cancer. *A. Horgan.* Oncotarget | 2015 | 6:44995-45003

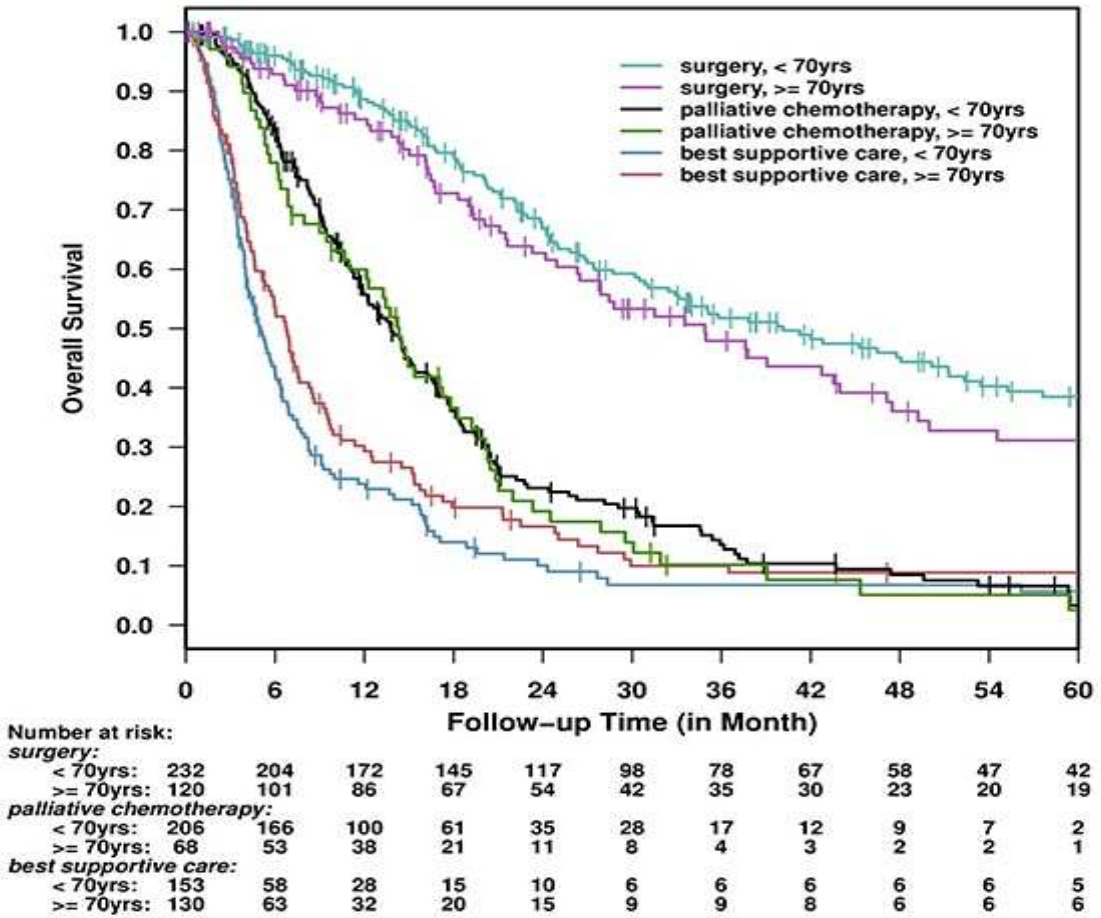
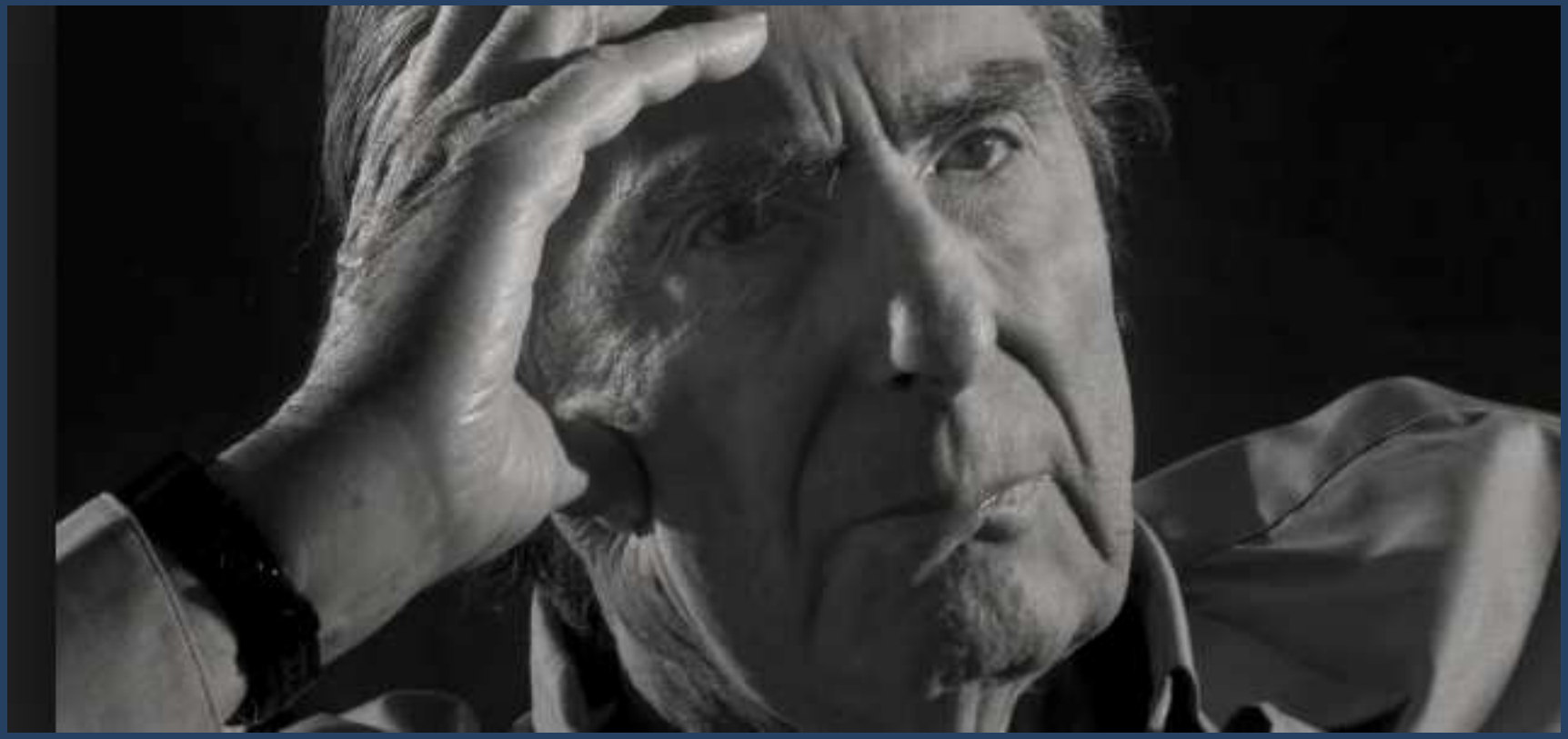


Figure 1 . Overal survival by age and treatment group



“Il tumore, in un tempo ragionevolmente breve peggiorerà molto. Se operiamo, la convalescenza sarà difficile. Un mese…forse anche due o tre mesi. In altri termini, sarà un inferno.

Si, sarà dura – disse lui – ma se non si fa niente potrebbe essere ancora più dura.”

P. Roth

1991, Patrimonio. Una storia vera

PROGNOSIS AND PREDICTIVE FACTORS OF PANCRATIC ADENOCARCINOMA
WHO Classification of Tumours of the Digestive System | 4° Edition, 2010

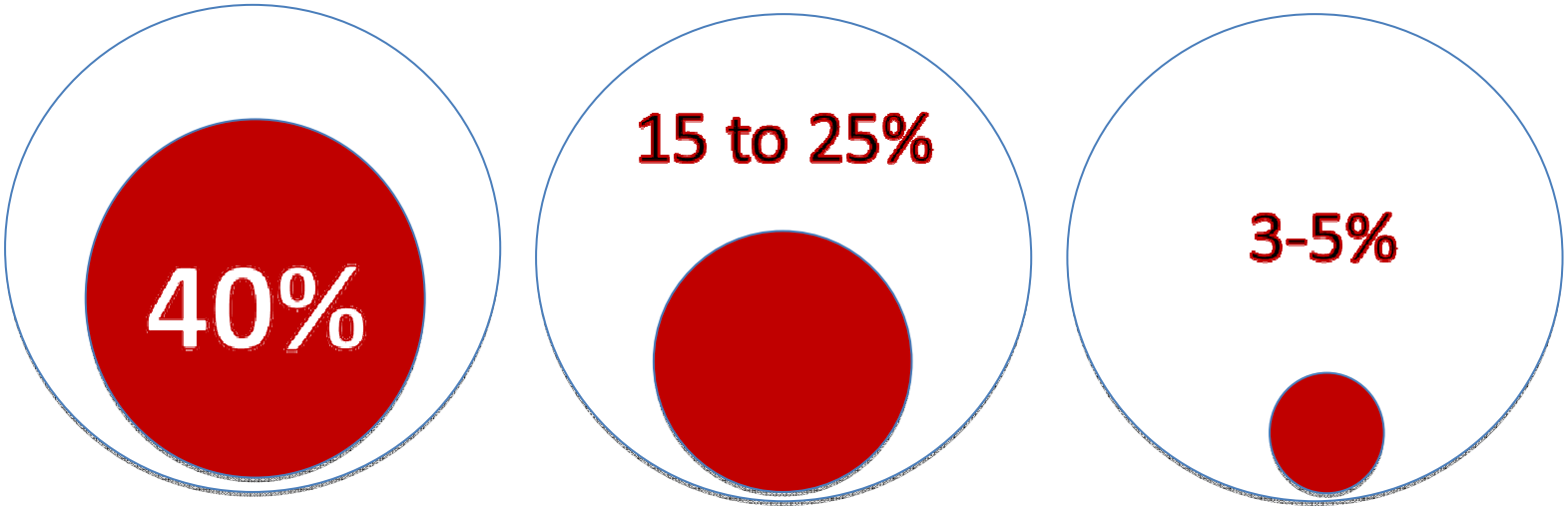


Figure 1. The survival rates for curative resection with PADC confined to the pancreas, for curative resection with PADC <30 mm and the overall survival.

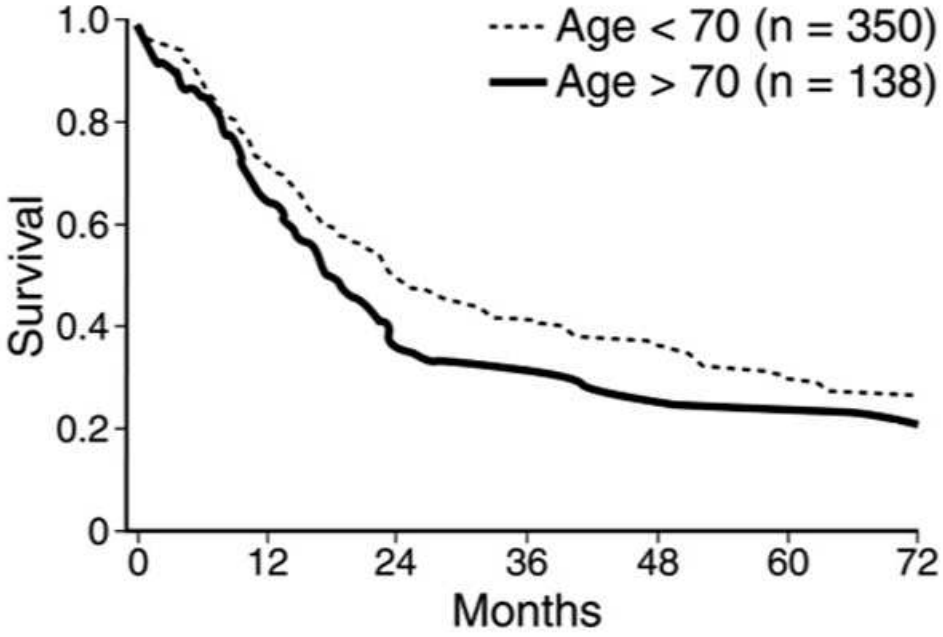
What is the Effect of Age on Pancreatic Resection?. *T.S. Riall.* Adv Surgery | 2009 | 43:233-249

The background

Pancreatic cancer disproportionately affects the elderly. The overall annual incidence of pancreatic cancer is approximately 11 cases per 100,000 population and over 80% of pancreatic cancer patients are over the age of 60. The incidence increases sharply with age. Patients 80 and older have an annual incidence of 87.2 cases per 100,000 population. Currently, pancreatic resection is the only potentially curative option for patients with pancreatic and other periampullary cancers.

What is the Effect of Age on Pancreatic Resection?. *T.S. Riall.* Adv Surgery | 2009 | 43:233-249

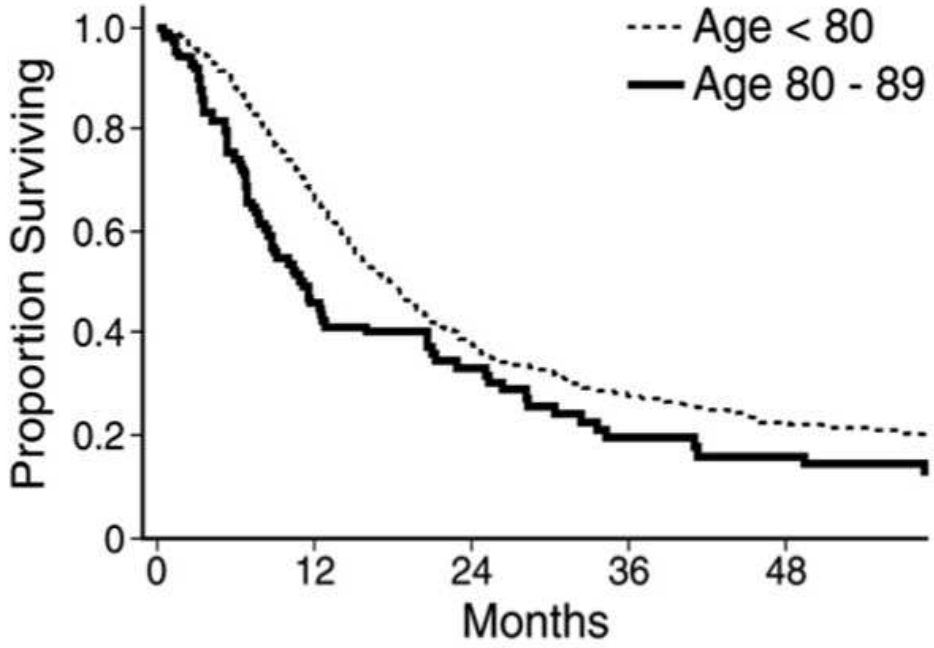
The results



Survival after pancreatic resection for patients age 70 years or older (n=138) compared with that of patients younger than 70 years of age (n=350, p = 0.03).

What is the Effect of Age on Pancreatic Resection?. *T.S. Riall.* Adv Surgery | 2009 | 43:233-249

The results



Actuarial survival curves comparing all patients with pancreatic cancer under 80 years of age (n=1022, median survival 18 months, 2-year survival 37.7%) to patients aged 80-89 (n=102, median survival 11 months, 2-year survival 33.0%, P=0.002).

What is the Effect of Age on Pancreatic Resection?. *T.S. Riall.* Adv Surgery | 2009 | 43:233-249

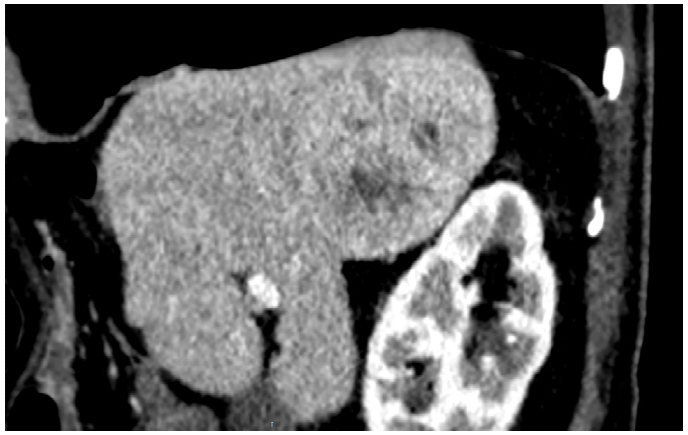
The application

Patients also need to be aware that surgical resection is the only curative option for pancreatic cancer. In reasonable risk elderly patients the benefit of surgical resection does not decrease with age and these patients **can experience long-term survival** and good quality of life. In fact, once patients over 80 get beyond the two year survival mark without cancer recurrence **their survival parallels** that of their age-matched counterparts.

Elderly patients also need to be aware of the fact that **hospital volume and surgeon experience** significantly impact outcomes.

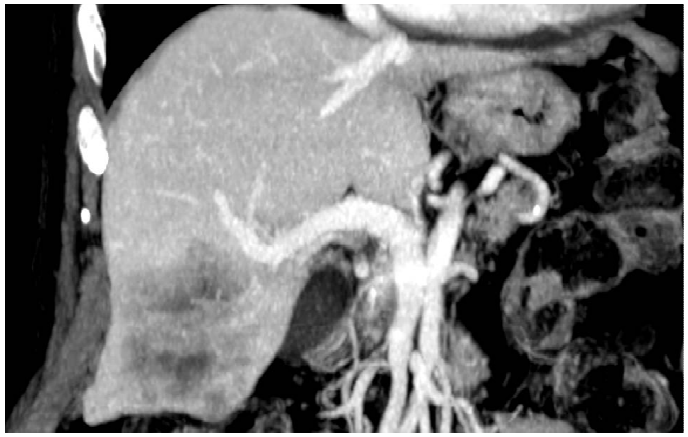
Case Reports

Caso 1. Ilvana, 1931. 83 anni |HCC *complicato*
03.07.2014: Resezione epatica SVII
Shock emorragico intraoperatorio
Terapia Intensiva
Reparto
21.07.204: DNR h. 17:00 | Decesso: h. 21:00

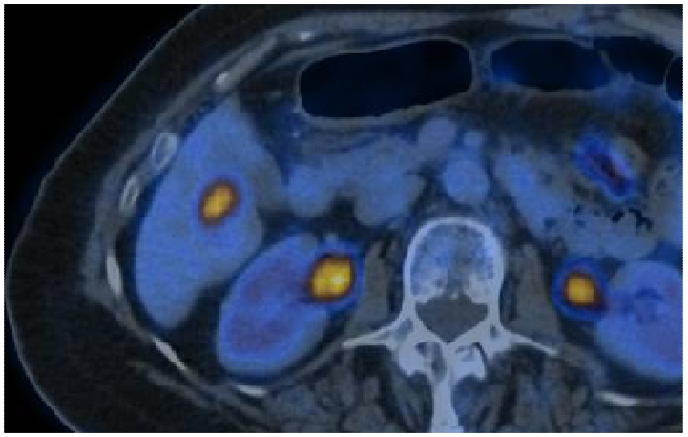


Caso 2. Gilberto, 1934. 83 anni |HCC *vasto*
12.05.2017: Resezione epatica SVII-VIII
Nessuna complicazione intraoperatoria
Terapia Intensiva
Reparto
30.05.2017: Dimissioni

Case Reports

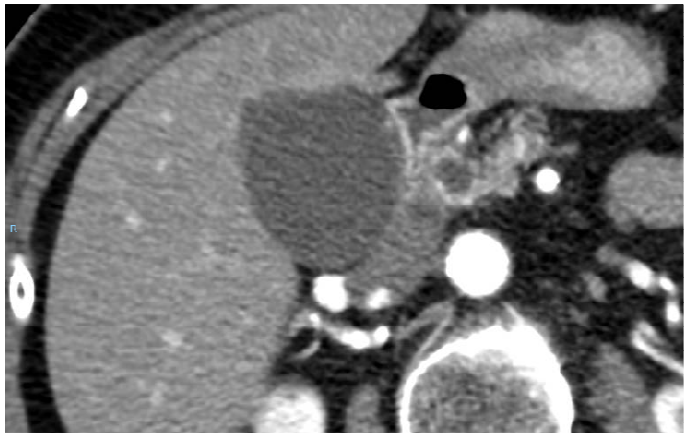


Caso 3. Adele, 1929. 88 anni |Neoplasia fegato
19.10.2017: Resezione epatica SV-VI
Reparto
27.10.2017: Dimissioni
Diagnosi: Adenoma pleomorfo metastatico

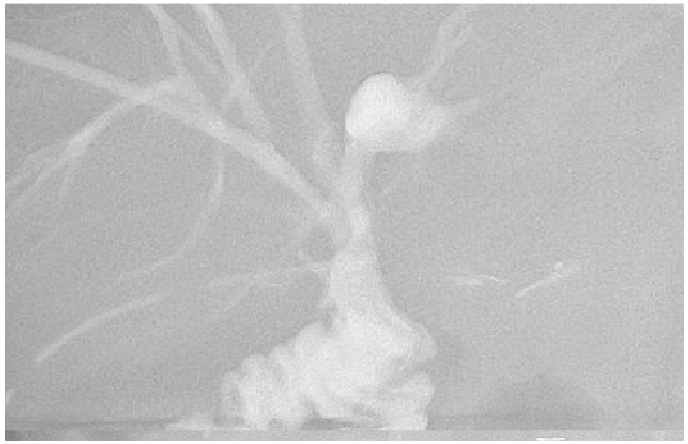


Caso 4. Liliana, 1939. 78 anni |Meta CR
No CHT | No RFA
22.06.2015: Resezione colica per ADC
02.02.2018: Resezione epatica SV + Colecist.mia
Reparto
08.02.2018: Dimissioni

Case Reports

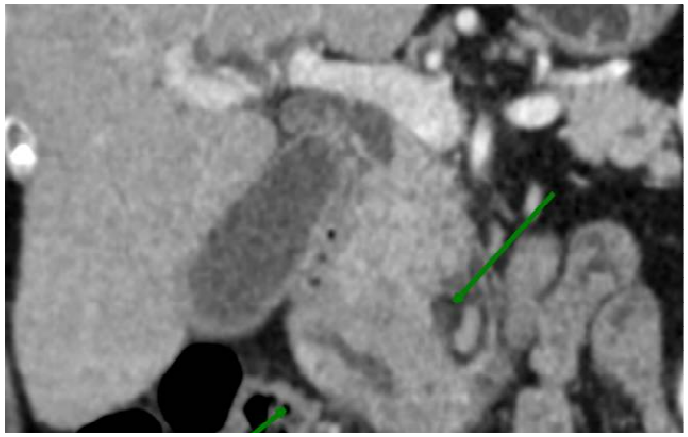


Caso 5. Maurizia, 1940. 78 anni|Neo Colecisti?
19.10.2016: Res. epatica SIV-V + Colec.mia | R1
Reparto
28.10.2016: Dimissioni
Diagnosi: ADC Colecisti + M LN + M Peritoneale
CHT | Libera da ricaduta

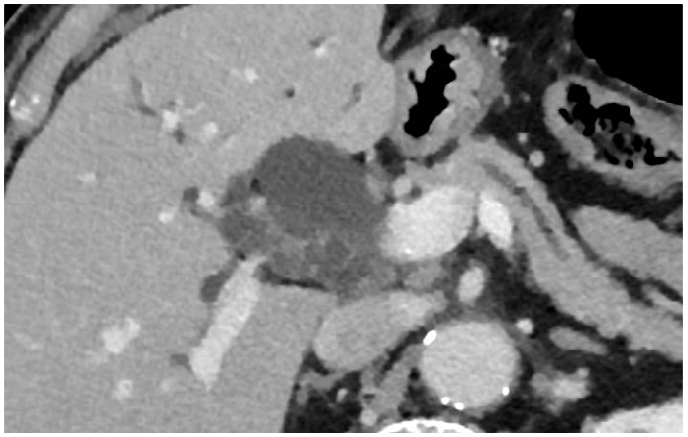


Caso 6. Pasqua, 1937. 81 anni |ADC Colec|VB
12.02.2018: Colec.mia + Res epatica + Bypass
BE
Reparto
Fistola biliare | Trattamento conservativo
22.03.2018: Trasferimento Medicina Lagosanto
Tuttora ricoverata in Lungo Degenza Lagosanto

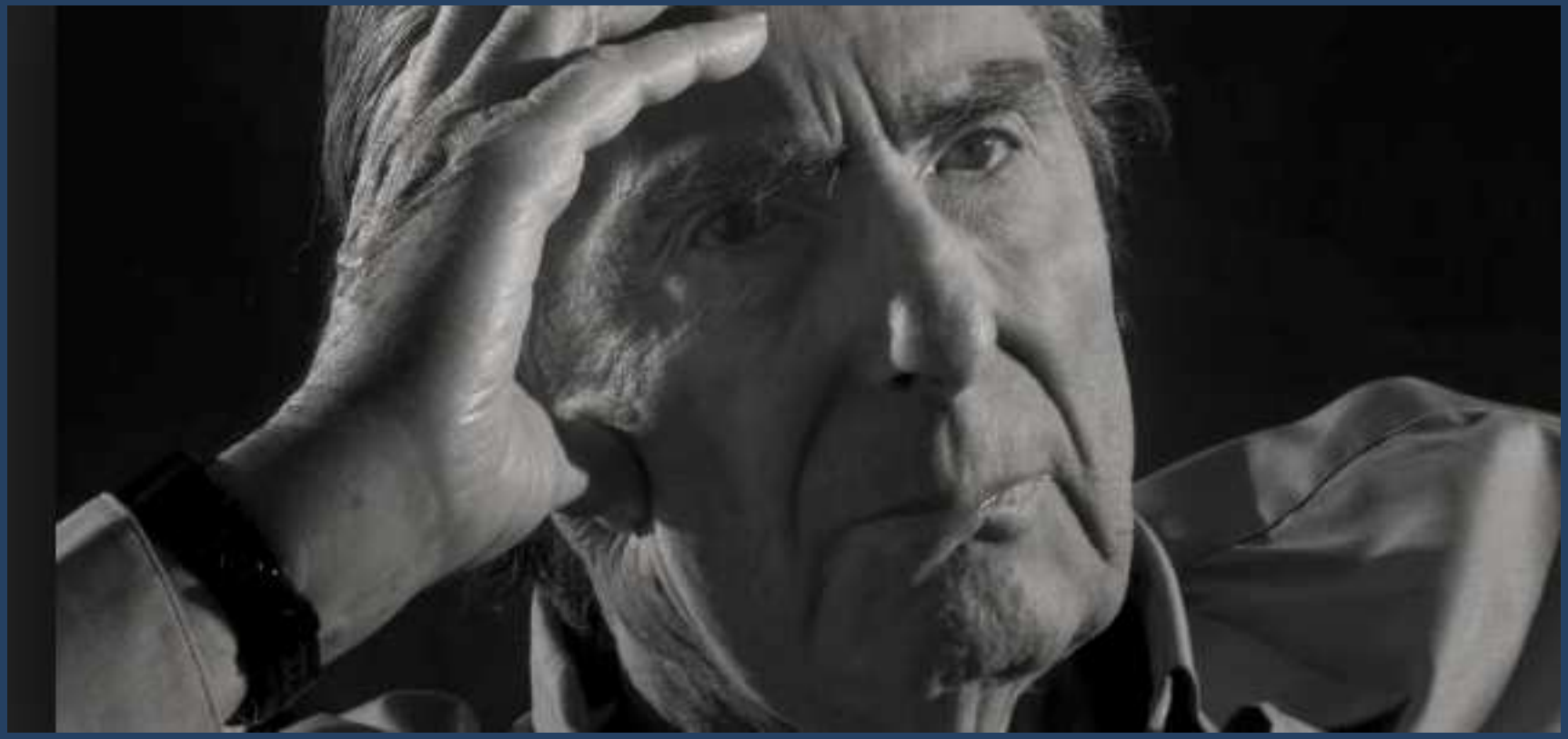
Qualche Caso Clinico



Caso 7. Marisa, 1932. 85 anni |ADC Duodeno
13.04.2017: Duodeno Pancreasectomia Totale
Terapia Intensiva
Reparto | Nessuna complicazione
10.05.2017: Dimissione
08.08.2017: Decesso per cause non tumorali



Caso 8. Giuseppino, 1939. 78 anni |ADC DB
08.02.2018: Duodeno Pancreasectomia Totale
Reparto
Terapia Intensiva per complicazione polmonare
Reparto
15.03.2018: Trasferimento L. D. Lagosanto



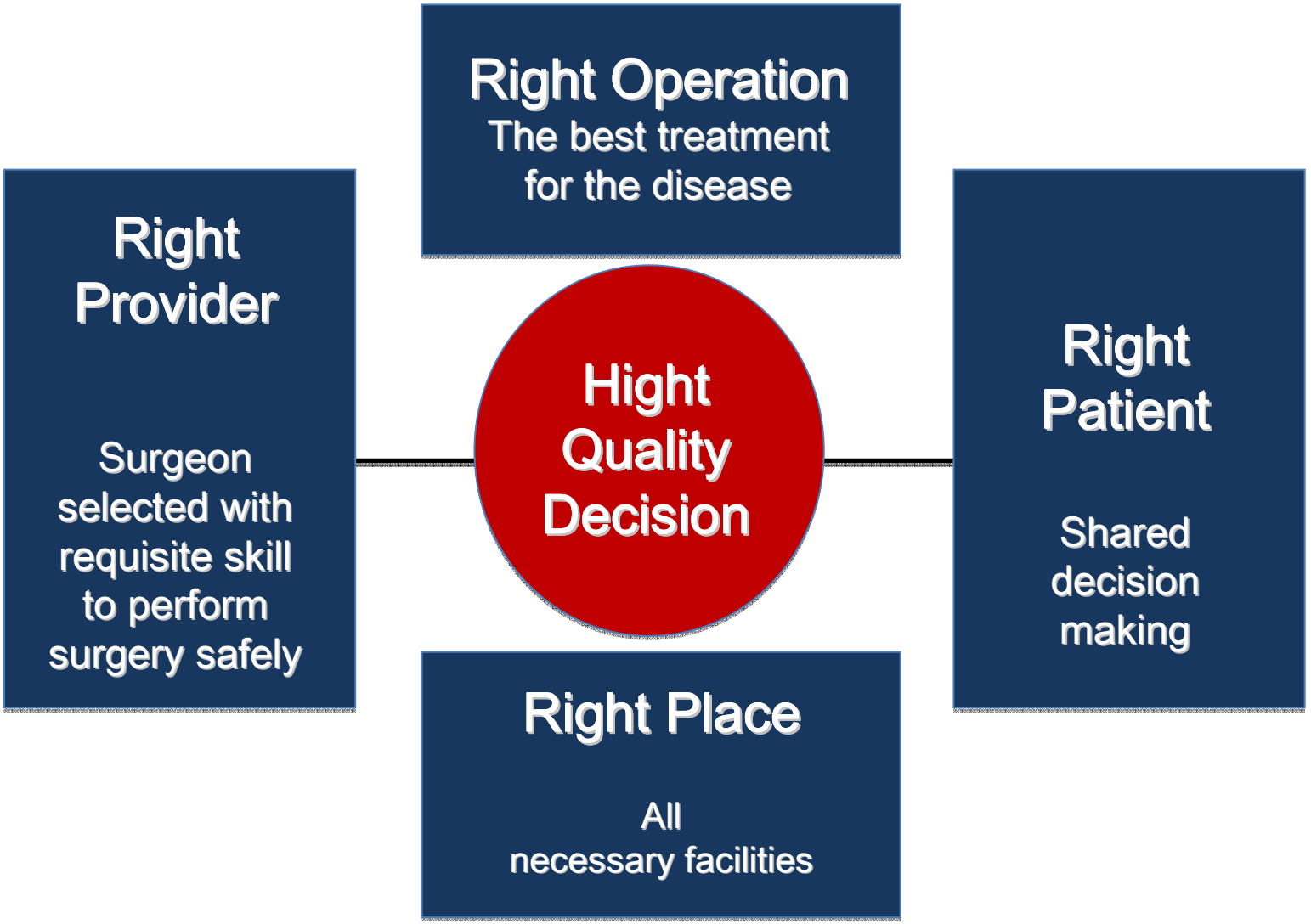
“Senti, ecco come stanno le cose. Se muore sotto i ferri, bè, sarà morto ad 86 anni, che non è l’età peggiore per morire. Se sopravvive, e se l’operazione è andata bene, cosa che, come dice il chirurgo, si verifica nel settantacinque per cento dei casi, allora benissimo”.

P. Roth

1991, Patrimonio. Una storia vera

A Conceptual Framework for Appropriateness in Surgical Care

Z. Cooper. | Anesthesiology | 2015



Note finali & Conclusioni

CHIRURGIA EPATOBILIARE e PANCREATICA

G. Bettelli, *Perioperative Care of the Elderly*	**2018**

- I pazienti anziani difficilmente sono elegibili a studi clinici randomizzati
- Improbabile attendersi risposte definitive dalla letteratura scientifica
- Accordare la decisione alle volontà del paziente
- Considerare le aspettative prognostiche dei tumori del distretto EBP
- Valutare le probabilità di successo di una procedura complessa EBP
- Calcolare i rischi connessi alla procedura chirurgica
- Calcolare la possibilità e le conseguenze di un insuccesso
- Considerare le implicazioni di negare una chirurgia potenzialmente curativa

Gray Turner, *Encouragements in Cancer Surgery*	**1925**

Effects of age on survival in patients undergoing resection of epatocellular carcinoma. *A. Cucchetti,* British J Surg | 2016 | 103:93-99

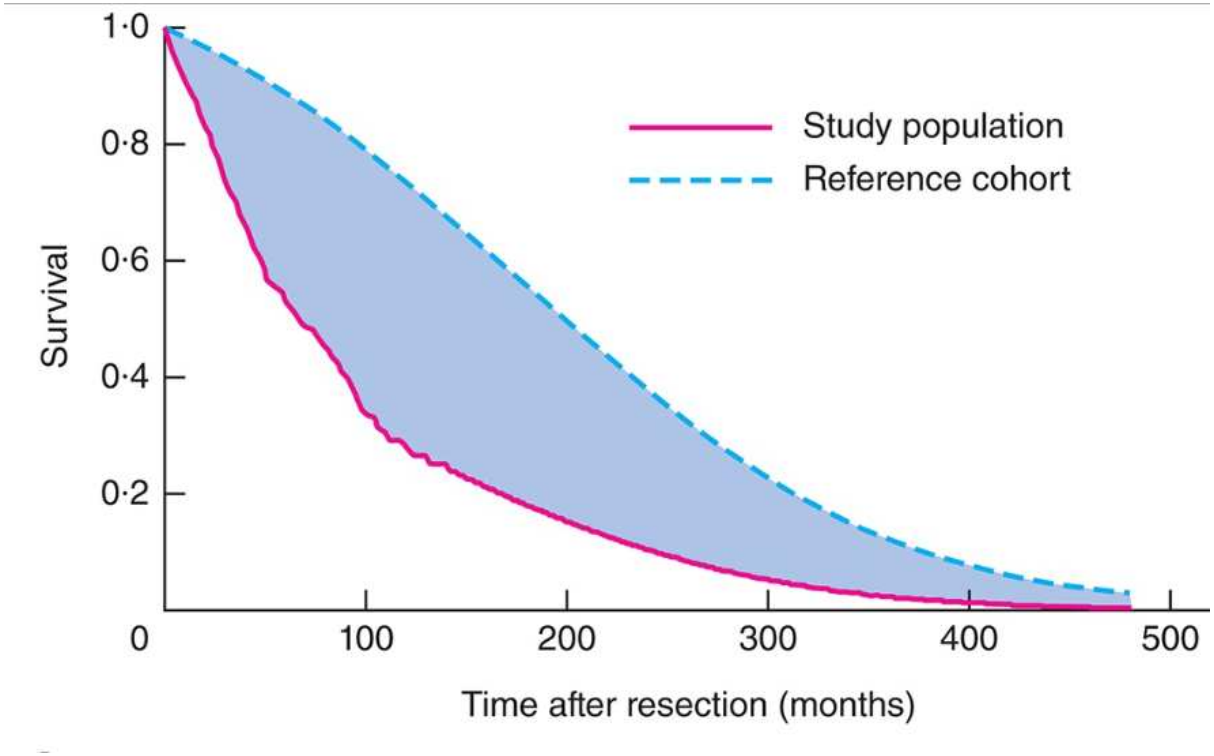


Fig1. Mean survival difference between patients who underwent resection and the age-, year- and sex-matched reference population after 40 years of extrapolation. The shaded area represents the mean number of years for life lost (YLL) after surgery for the entire study population.