Neue Optionen zur Behandlung des Lungenkarzinoms

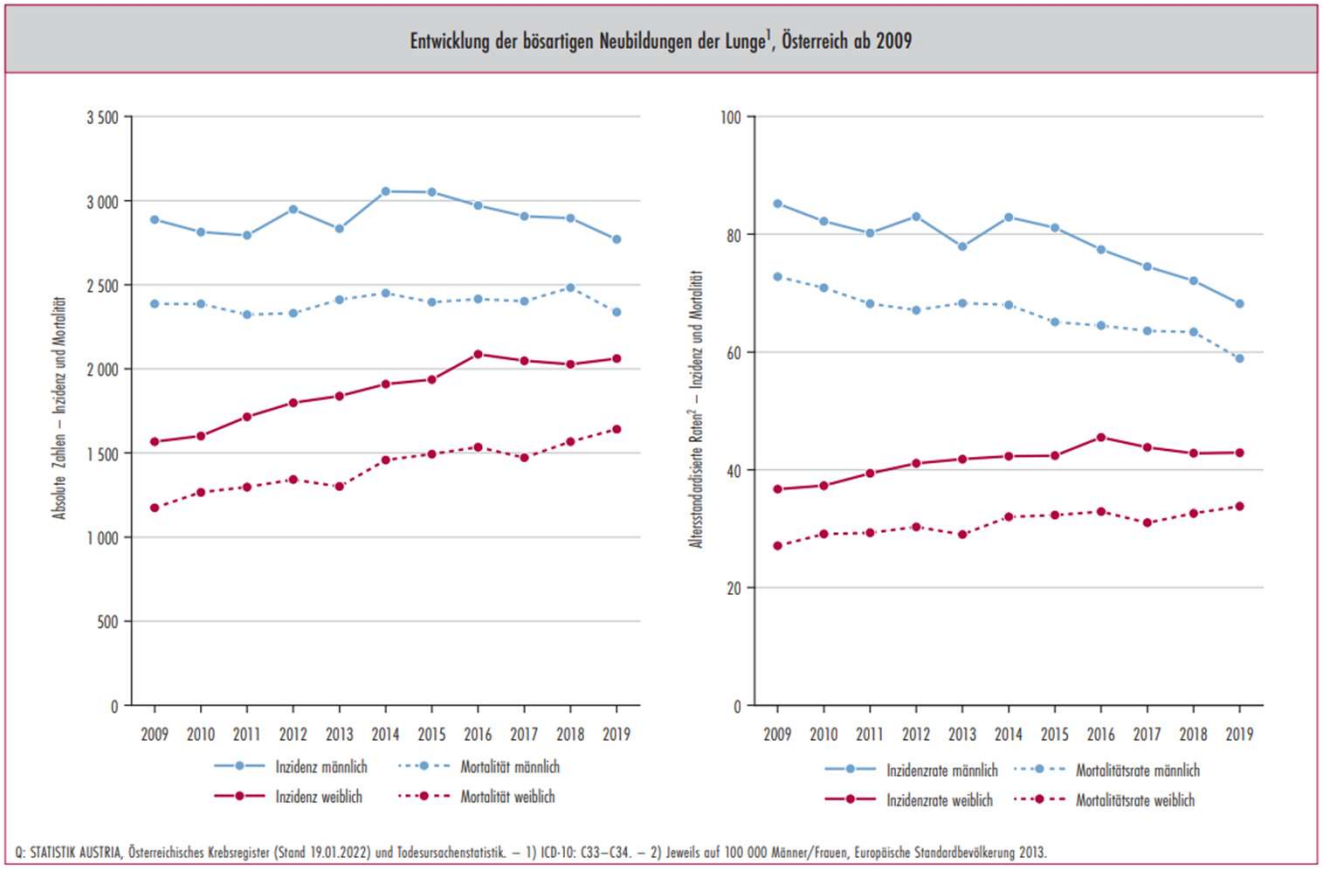
Romana Wass, MD, PhD

Lungenkrebs ist häufig

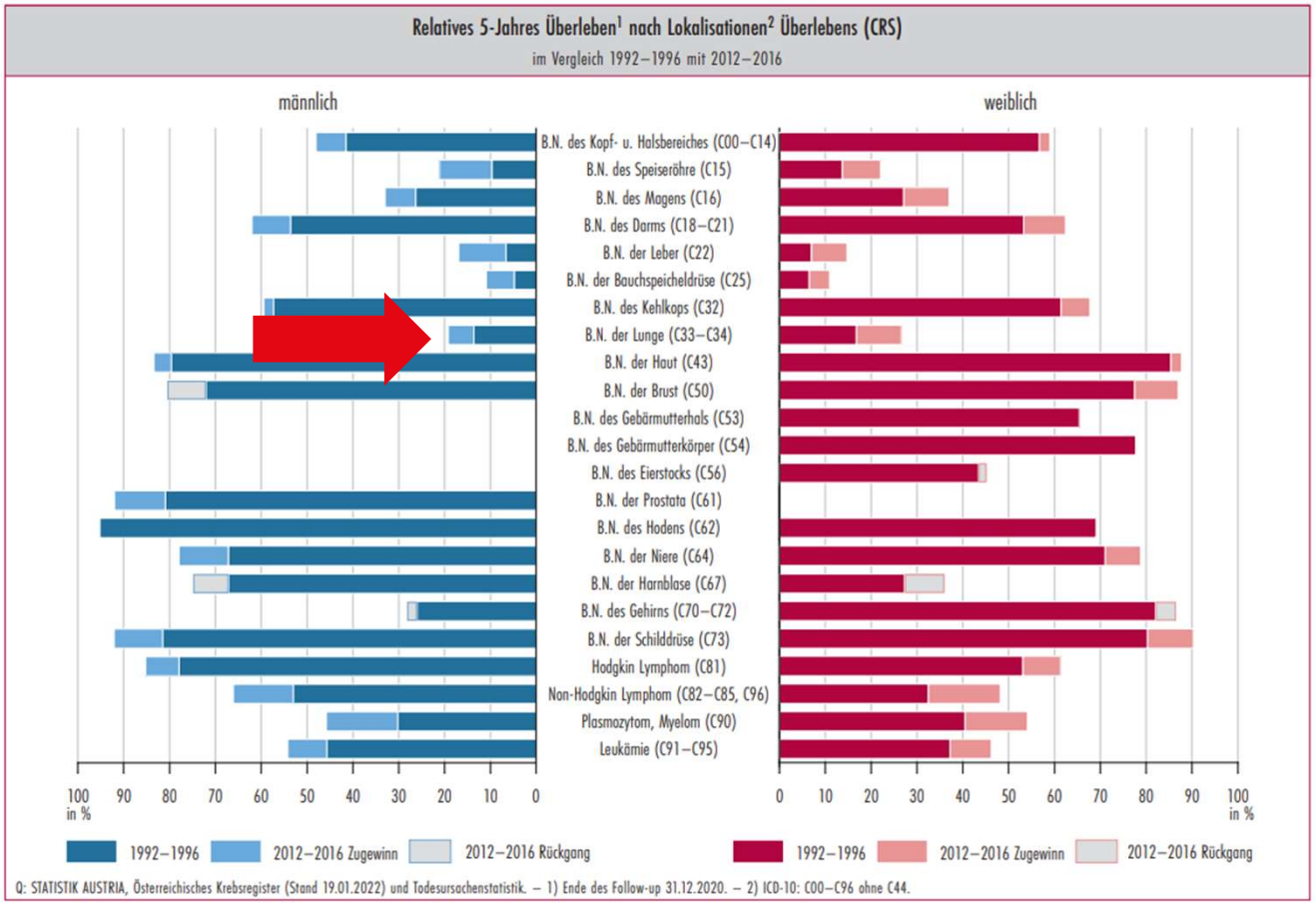
Statistik Austria, Österreichisches Krebsregister 2022, Bildquelle: The Irish Lung Cancer Alliance

Geschlechtsverteilung gleicht sich an

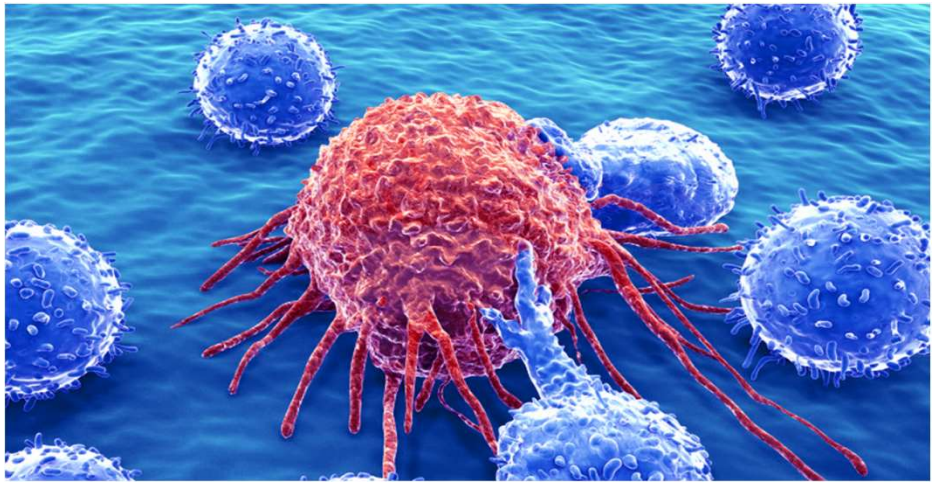
Q: STATISTIK AUSTRIA, Österreichisc



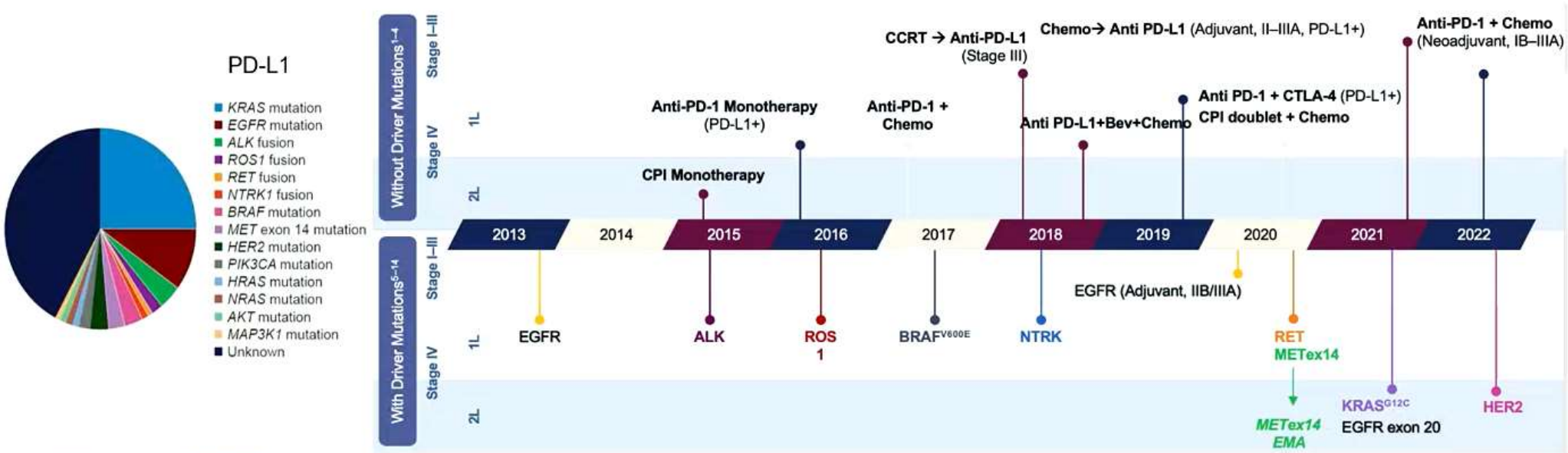
Killer Nr. 1


Relatives 5-Jahres Überleben[1] nach Lokalisationen[2] Überlebens (CRS)
im Vergleich 1992–1996 mit 2012–2016
männlich
weiblich
B.N. des Kopf- u. Halsbereiches (C00–C14)
B.N. des Speiseröhre (C15)
B.N. des Magens (C16)
B.N. des Darms (C18–C21)
B.N. der Leber (C22)
B.N. der Bauchspeicheldrüse (C25)
B.N. des Kehlkops (C32)
B.N. der Lunge (C33–C34)
B.N. der Haut (C43)
B.N. der Brust (C50)
B.N. des Gebärmutterhals (C53)
B.N. des Gebärmutterkörper (C54)
B.N. des Eierstocks (C56)
B.N. der Prostata (C61)
B.N. des Hodens (C62)
B.N. der Niere (C64)
B.N. der Harnblase (C67)
B.N. des Gehirns (C70–C72)
B.N. der Schilddrüse (C73)
Hodgkin Lymphom (C81)
Non-Hodgkin Lymphom (C82–C85, C96)
Plasmozytom, Myelom (C90)
Leukämie (C91–C95)
100 90 80 70 60 50 40 30 20 10 0
in %
0 10 20 30 40 50 60 70 80 90 100
in %
1992–1996
2012–2016 Zugewinn
2012–2016 Rückgang
1992–1996
2012–2016 Zugewinn
2012–2016 Rückgang
Q: STATISTIK AUSTRIA, Österreichisches Krebsregister (Stand 19.01.2022) und Todesursachenstatistik. – 1) Ende des Follow-up 31.12.2020. – 2) ICD-10: C00–C96 ohne C44.

Weiterhin schlechte Prognose



Entwicklung der Therapielandschaft

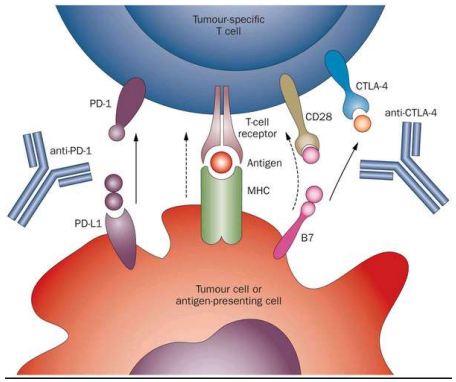


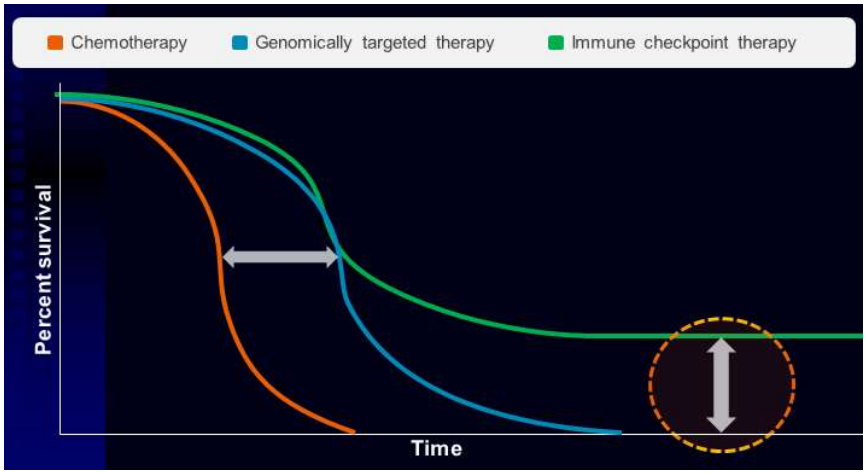
PARIS 2022 ESMO congress

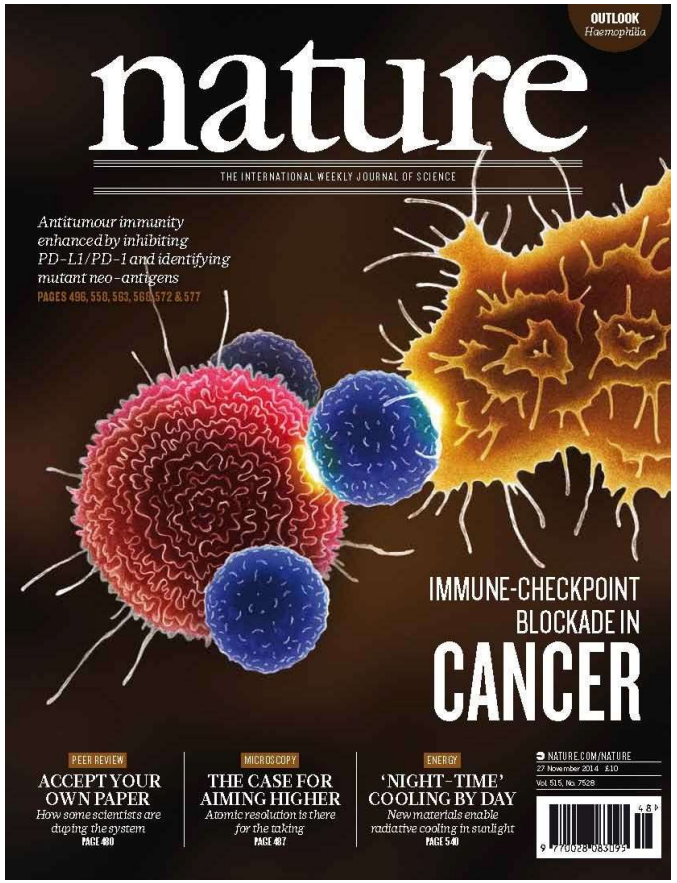
Natasha Leighl

Sung CA Cancer J Clin 2021; https://ecis.jrc.ec.europa.eu ; Am Cancer Soc 2022; Li JCO 2013; updated from Planchard WCLC2022

Checkpunktinhibitoren in der Krebstherapie

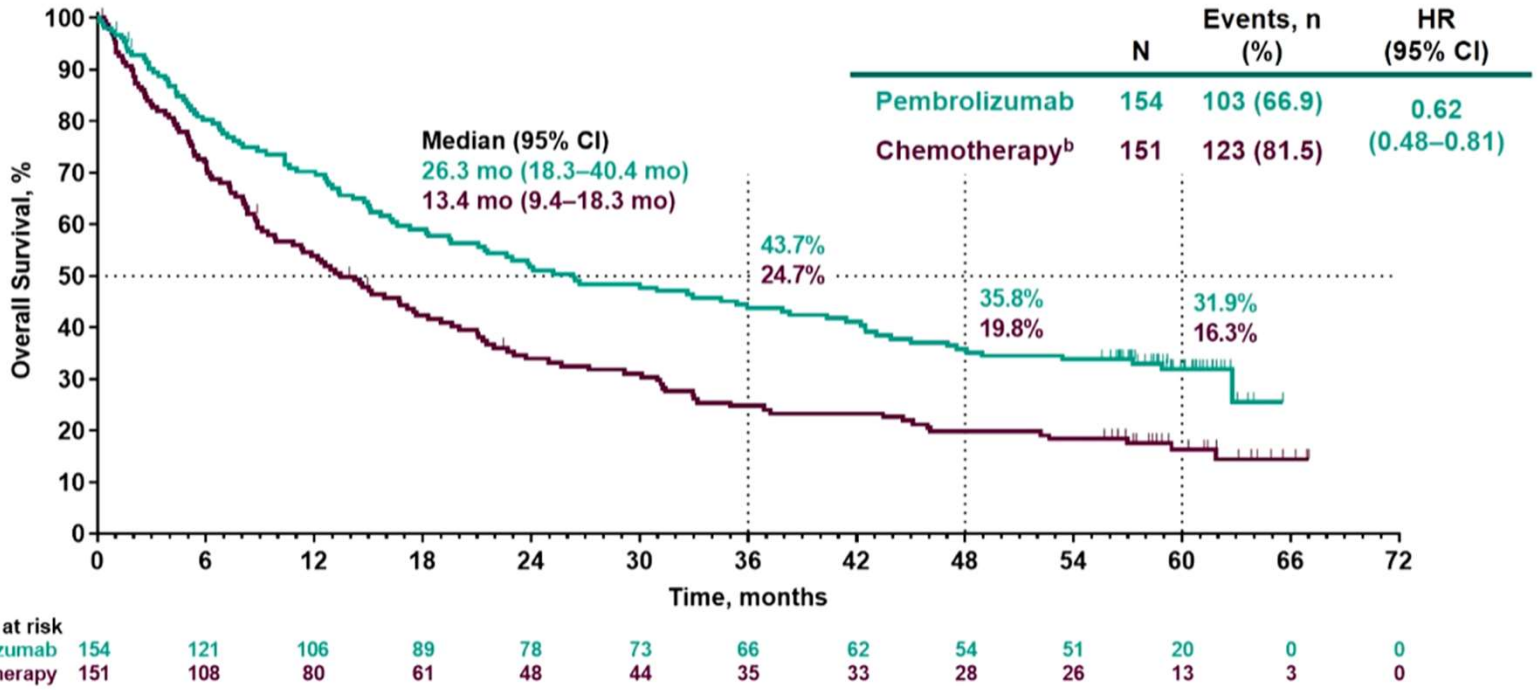






Chemotherapie vs. Immuntherapie

5 Jahres OS update – Keynote 024

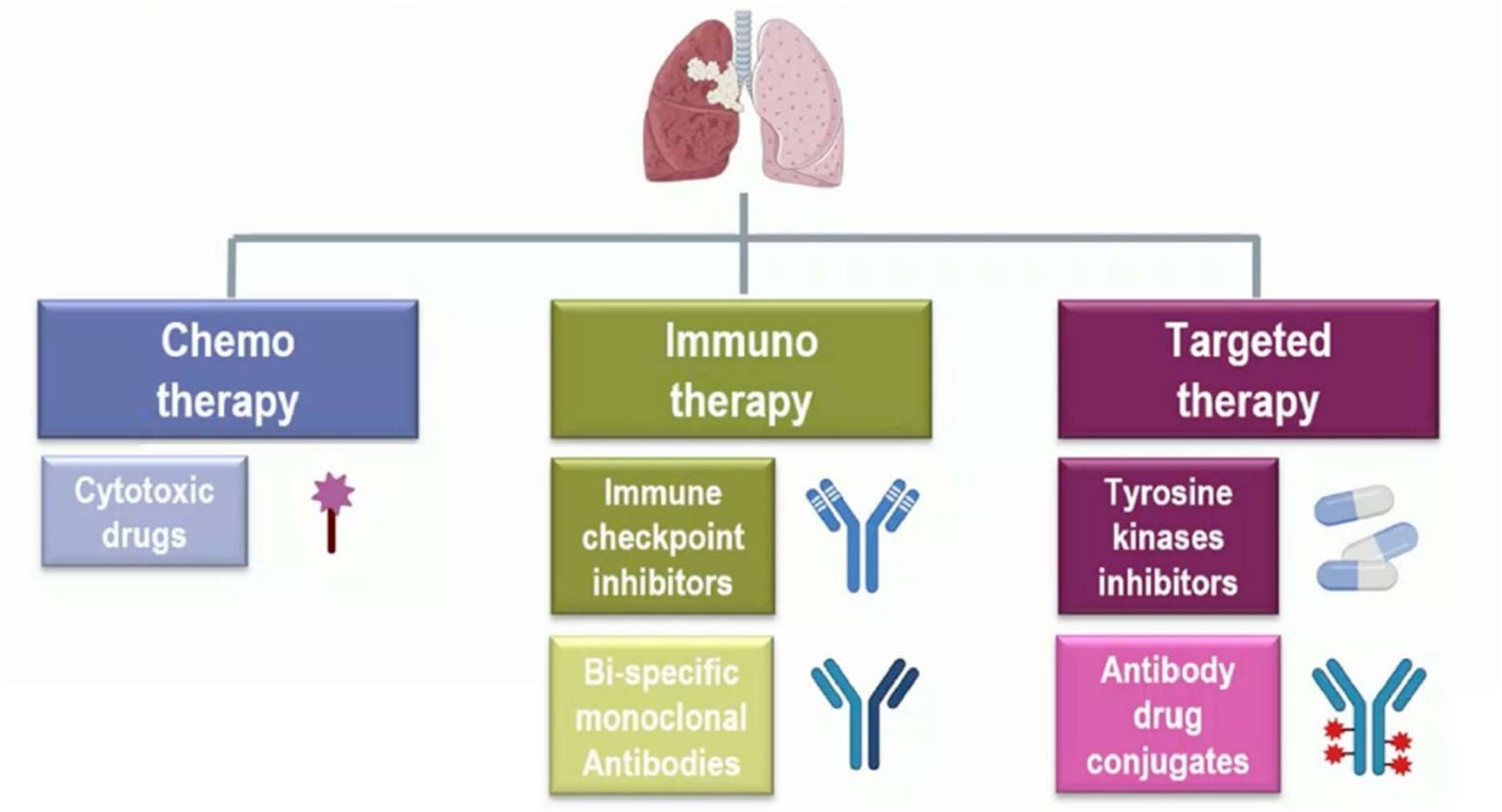


[a]ITT population.
[b]Effective crossover rate from chemotherapy to anti–PD-(L)1 therapy, 66.0% (99 patients in total crossed over to anti–PD-[L]1 therapy: 83 patients crossed over to pembrolizumab during the study, and 16 patients received subsequent anti–PD-[L]1 therapy outside of crossover; patients may have received >1 subsequent anti–PD-[L]1 therapy). Data cutoff: June 1, 2020.

Brahmer et al, ESMO 2020

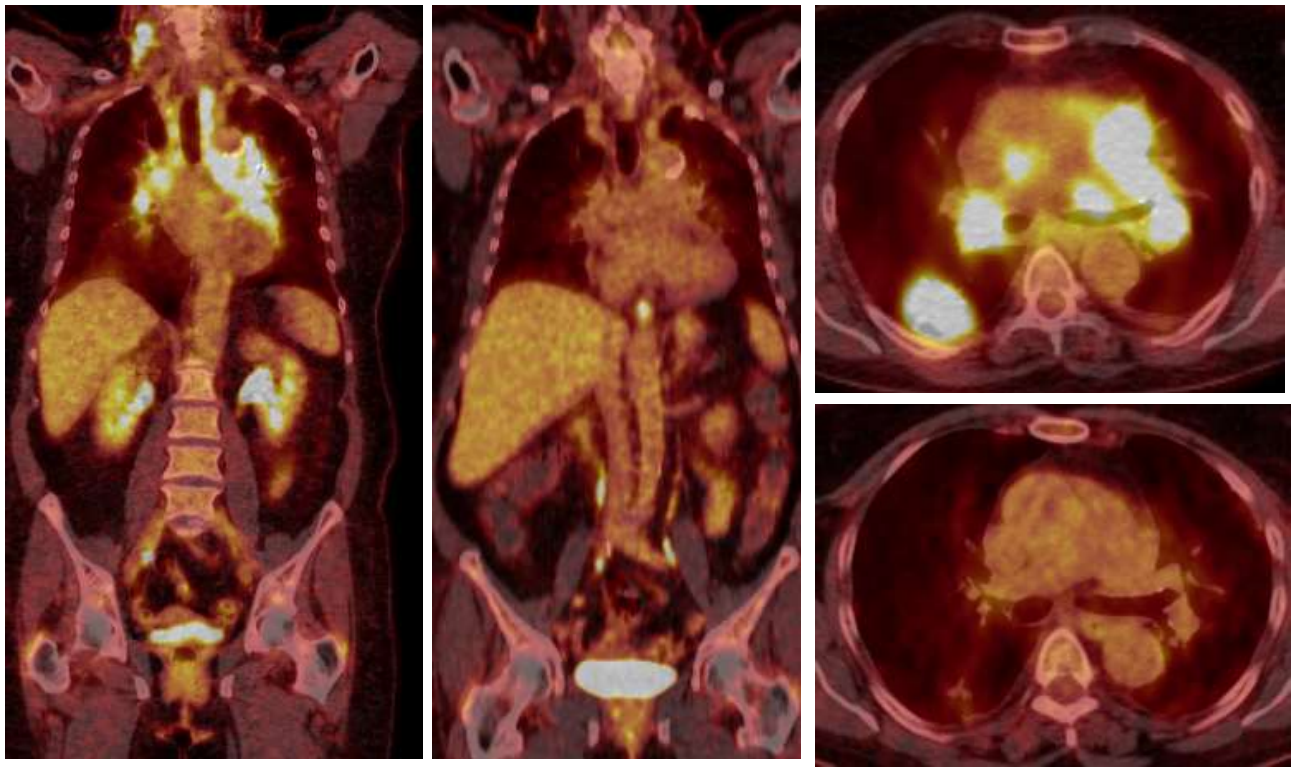
PD-L1 the key to success?

„Pillars“ of lung cancer treatment

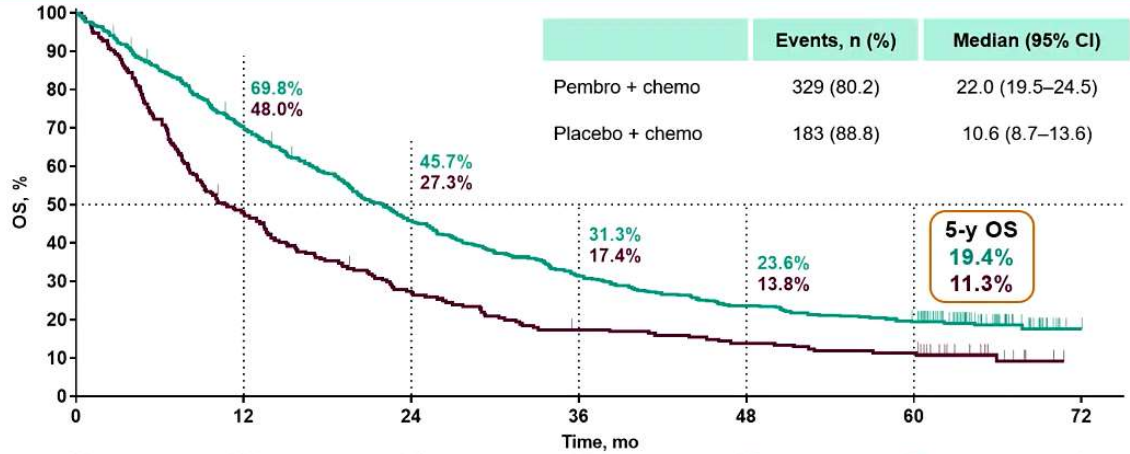


Chemo/Immuntherapie, Plattenepithelkarzinom

JOHANNES KEPLER UNIVERSITÄT LINZ | Kepler Universitäts Klinikum



OS: ITT Population



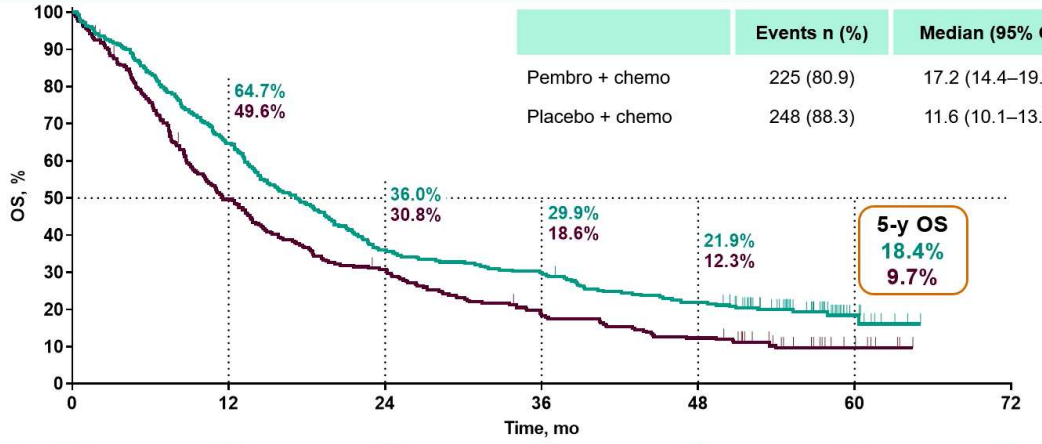
	Events, n (%)	Median (95% CI)	HR (95% CI)
Pembro + chemo	329 (80.2)	22.0 (19.5–24.5)	0.60 (0.50–0.72)
Placebo + chemo	183 (88.8)	10.6 (8.7–13.6)	

No. at risk							
Pembro + chemo	410	283	184	126	95	77	0
Placebo + chemo	206	98	55	34	27	22	0

	PD-L1 TPS ≥50%		PD-L1 TPS 1%–49%		PD-L1 TPS <1%	
	Pembro + chemo (n = 132)	Placebo + chemo (n = 70)	Pembro + chemo (n = 128)	Placebo + chemo (n = 58)	Pembro + chemo (n = 127)	Placebo + chemo (n = 63)
OS HR (95% CI)	0.68 (0.49–0.96)		0.65 (0.46–0.90)		0.55 (0.39–0.76)	
5-y OS rate,[a] %	29.6	21.4	19.8	7.7	9.6	5.3

[a]Kaplan-Meier estimate. Data cutoff date: March 8, 2022.

OS: ITT Population

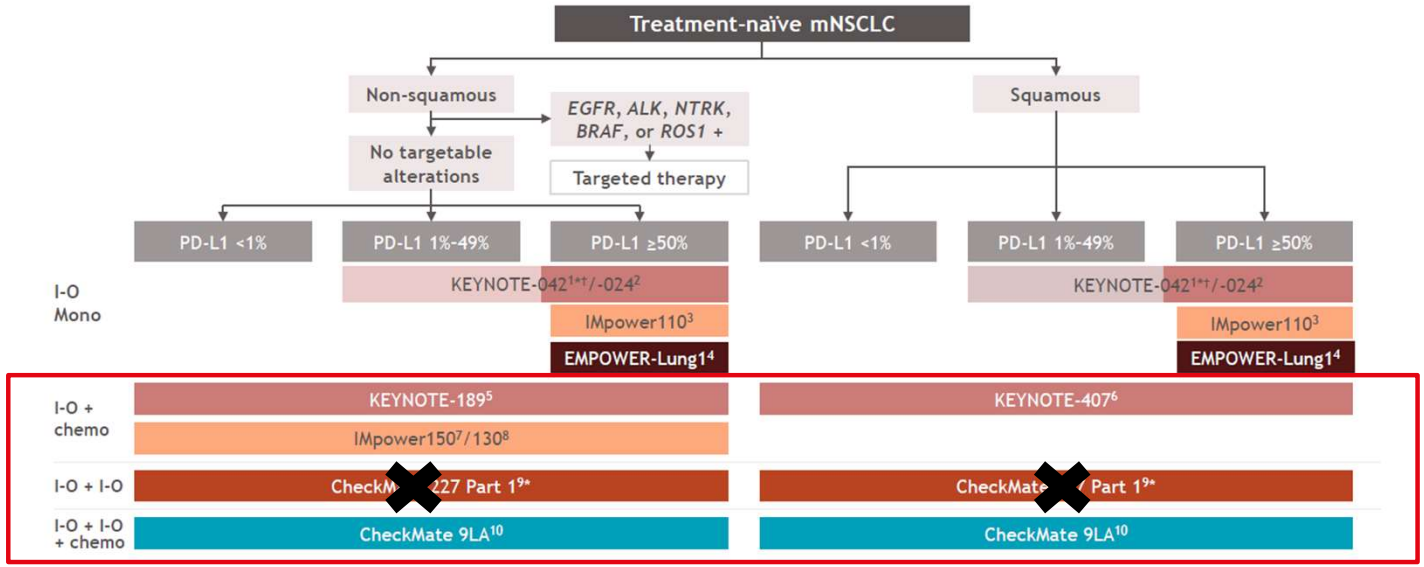


	Events n (%)	Median (95% CI)	HR (95% CI)
Pembro + chemo	225 (80.9)	17.2 (14.4–19.7)	0.71 (0.59–0.85)
Placebo + chemo	248 (88.3)	11.6 (10.1–13.7)	

	PD-L1 TPS ≥50%		PD-L1 TPS 1%–49%		PD-L1 TPS <1%	
	Pembro + chemo (n = 73)	Placebo + chemo (n = 73)	Pembro + chemo (n = 103)	Placebo + chemo (n = 104)	Pembro + chemo (n = 95)	Placebo + chemo (n = 99)
OS HR (95% CI)	0.68 (0.47–0.97)		0.61 (0.45–0.83)		0.83 (0.61–1.13)	
5-y OS rate,[a] %	23.3	8.3	20.6	7.6	10.7	13.1

[a]Kaplan-Meier estimate. Data cutoff date: February 23, 2022.

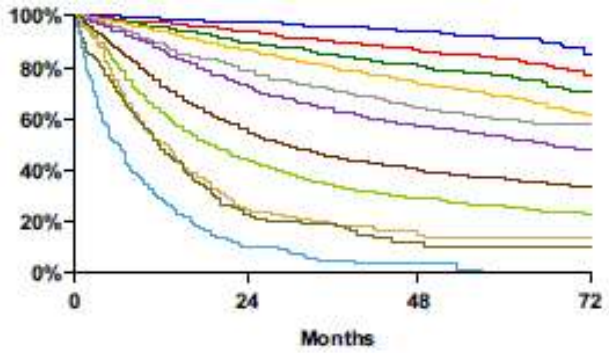
Zahlreiche Optionen in der Erstlinie



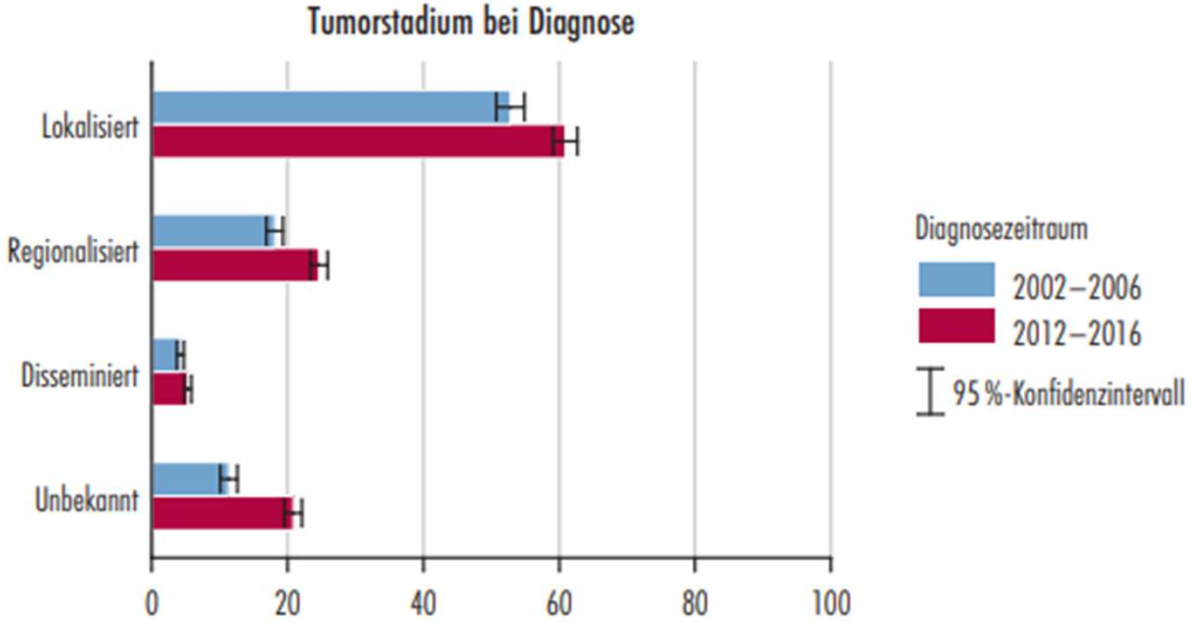
This diagram is intended for educational purposes only. It reflects the views of the presenter and not the current treatment landscape in mNSCLC.
*Regulatory status varies globally. †ESMO guidelines indicate that benefit driven mostly by high-expressors.

1. Cho BC et al. Poster presentation at WCLC 2020. Abstract FP13.04. 2. Rock M et al. *J Clin Oncol*. 2021;39(21):2339-2349. 3. Herbst RS et al. Poster presentation at WCLC 2020. Abstract FP13.03. 4. Sezer A et al. *Lancet* 2021;397:592-604. 5. Gray JE et al. Poster presentation at WCLC 2020. Abstract FP13.02. 6. Robinson AG et al. Oral presentation at ELCC 2021. Abstract 970. 7. Socinski MA et al. Oral presentation at AACR 2020. Abstract CT216. 8. West H et al. Lancet Oncol 2019; 20(7):924-937. 9. Hellmann MD et al. *N Engl J Med*. 2018;378(22):2093-2104. 10. Paz-Ares L et al. *Lancet Oncol* 2021; 22(2):198-211.

Gesamtüberleben ist stark vom Stadium abhängig!



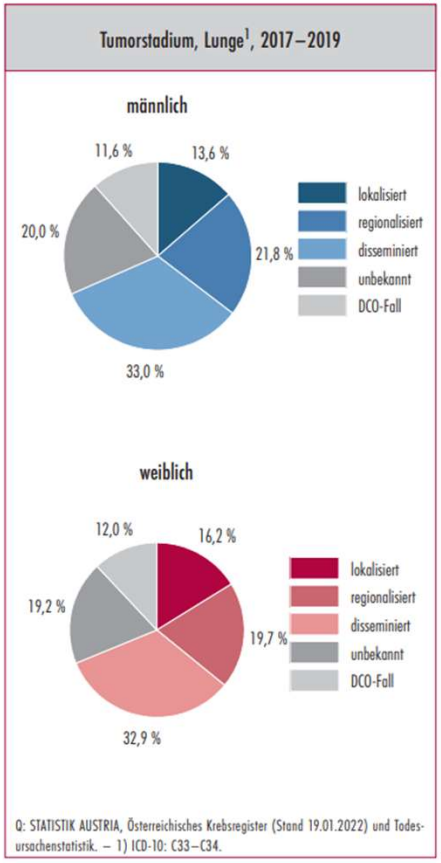
Proposed	Events / N	MST	24 Month	60 Month
IA1	68 / 781	NR	97%	92%
IA2	505 / 3105	NR	94%	83%
IA3	546 / 2417	NR	90%	77%
IB	560 / 1928	NR	87%	68%
IIA	215 / 585	NR	79%	60%
IIB	605 / 1453	66.0	72%	53%
IIIA	2052 / 3200	29.3	55%	36%
IIIB	1551 / 2140	19.0	44%	26%
IIIC	831 / 986	12.6	24%	13%
IVA	336 / 484	11.5	23%	10%
IVB	328 / 398	6.0	10%	0%



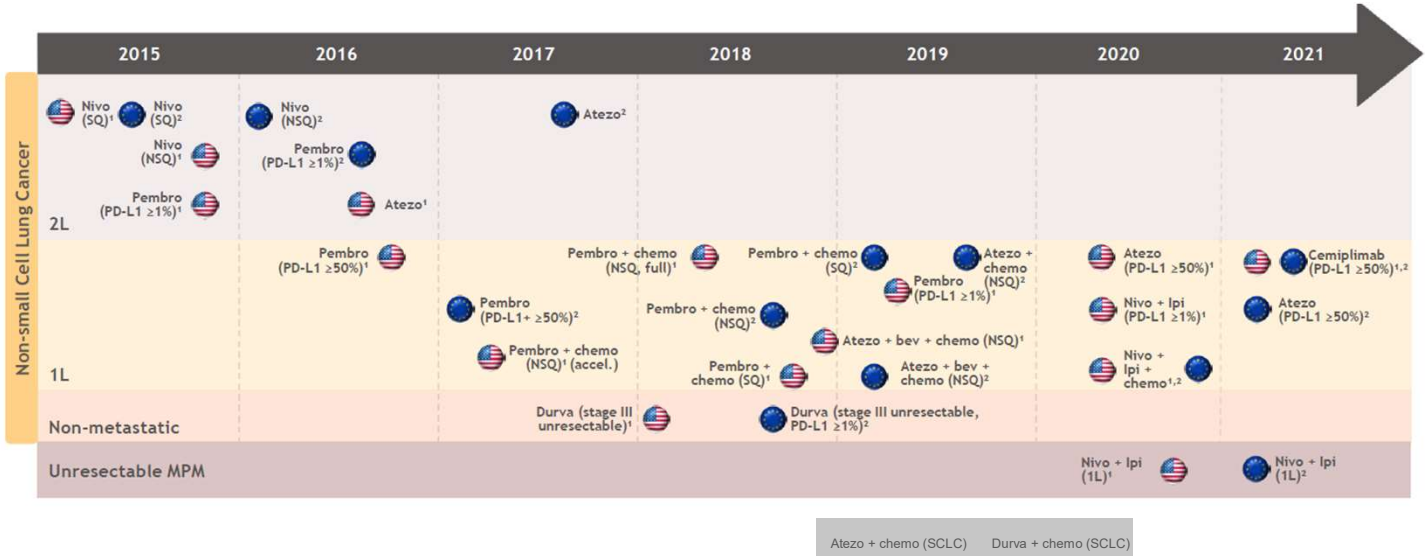
Q: STATISTIK AUSTRIA, Österreichisches Krebsregister (Stand 19.01.2022) und Todesursachenstatistik. – 1) Ende des Follow-up 31.12.2020. – 2) ICD-10: C33–C34.

Goldstraw P. et al, JTO 2015, Statistik Austria, Österreichisches Krebsregister 2022

Häufig (zu) späte Diagnose



… ohne Immuntherapie geht es nicht !?

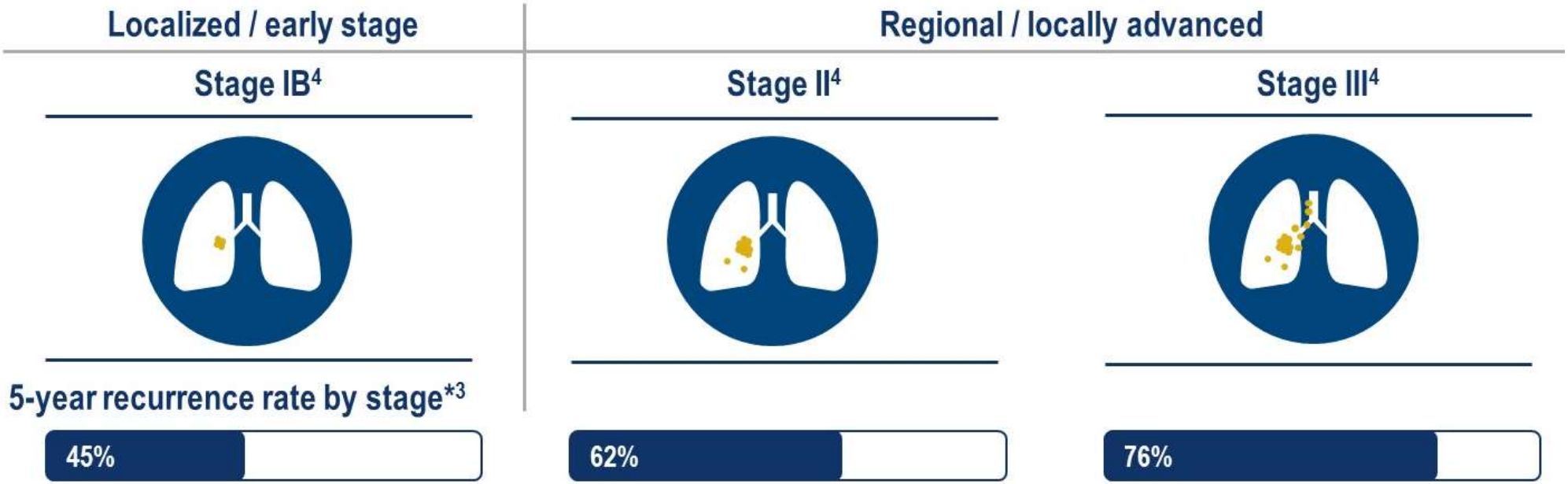


Slide reflects approvals in the US and EU as of June 2, 2021. Refer to each country's local guidance for specific therapeutic strategies.
1. US Food and Drug Administration. 2. European Medicines Agency.

2022

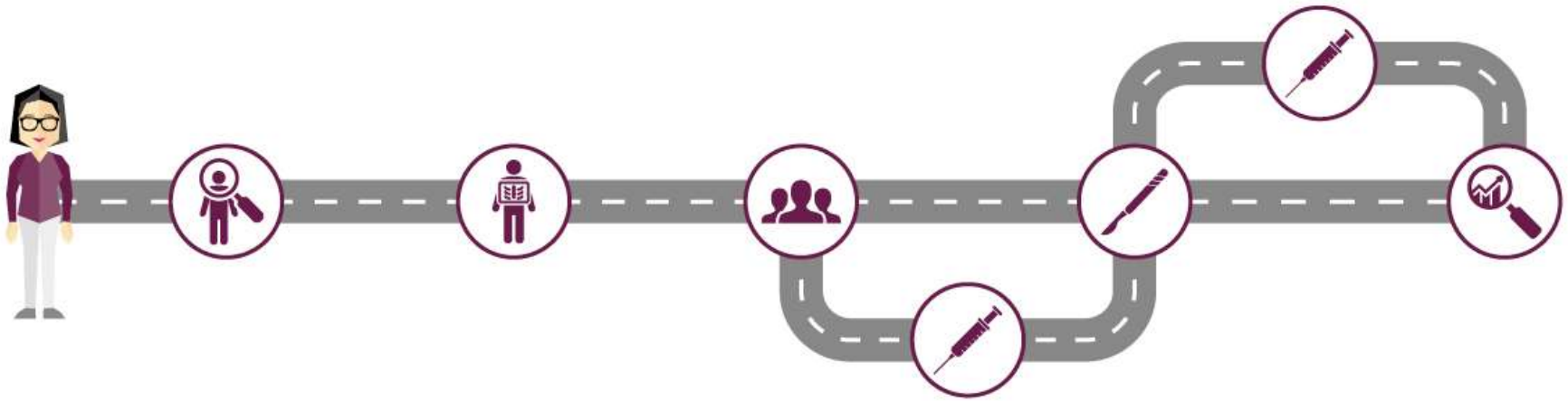
Early stage NSCLC

Schlechtes Outcome!!

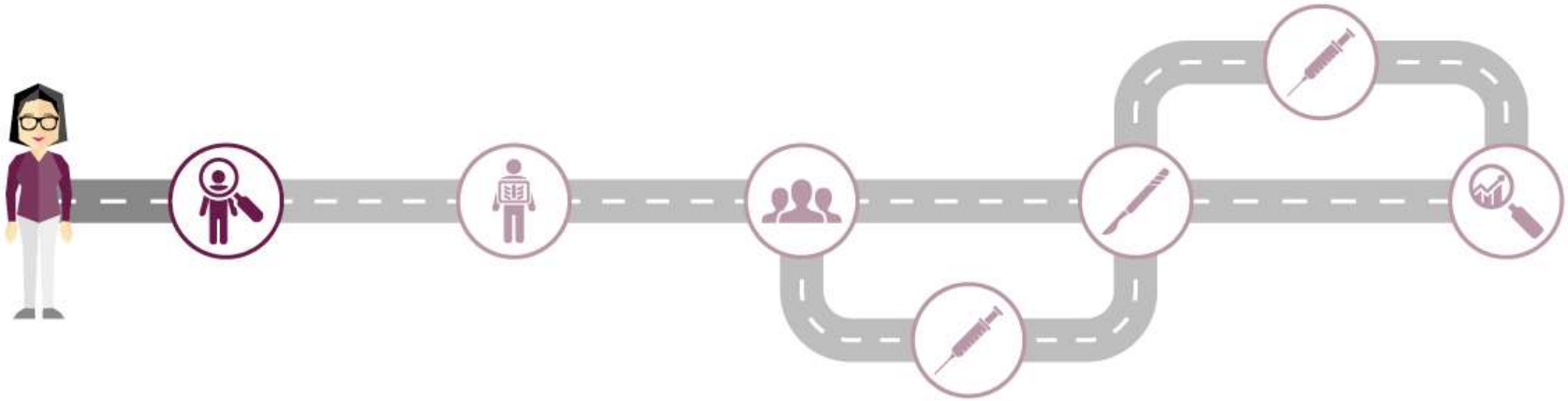


. Edge SB et al. *AJCC Cancer Staging Manual.* 7th ed. New York, NY: Springer; 2010.

eNSCLC Patient Journey- von der Diagnose zur Behandlung



Entdeckung einer suspekten Läsion/initiale Konsultation



Symptome

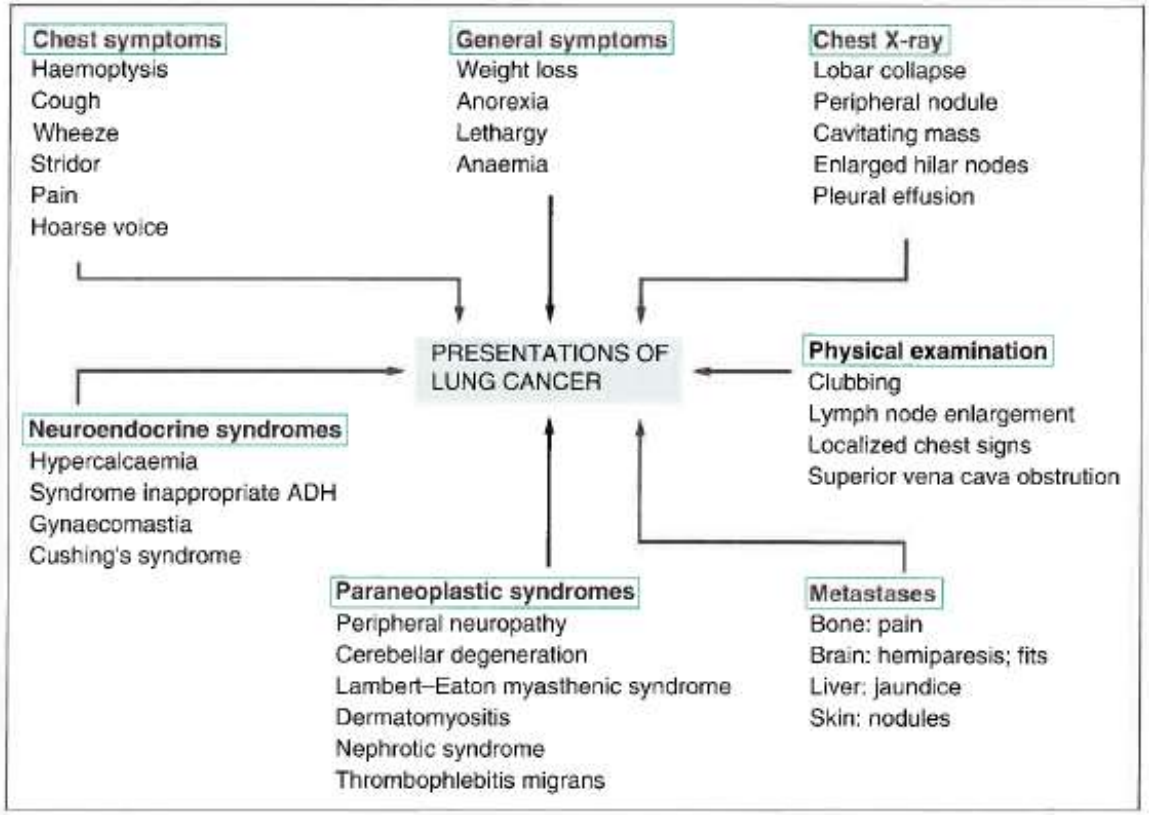
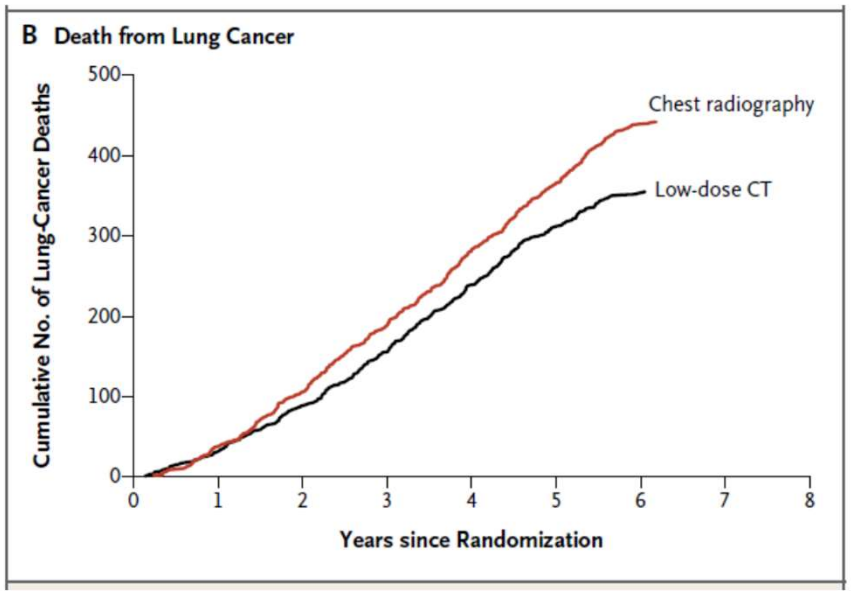
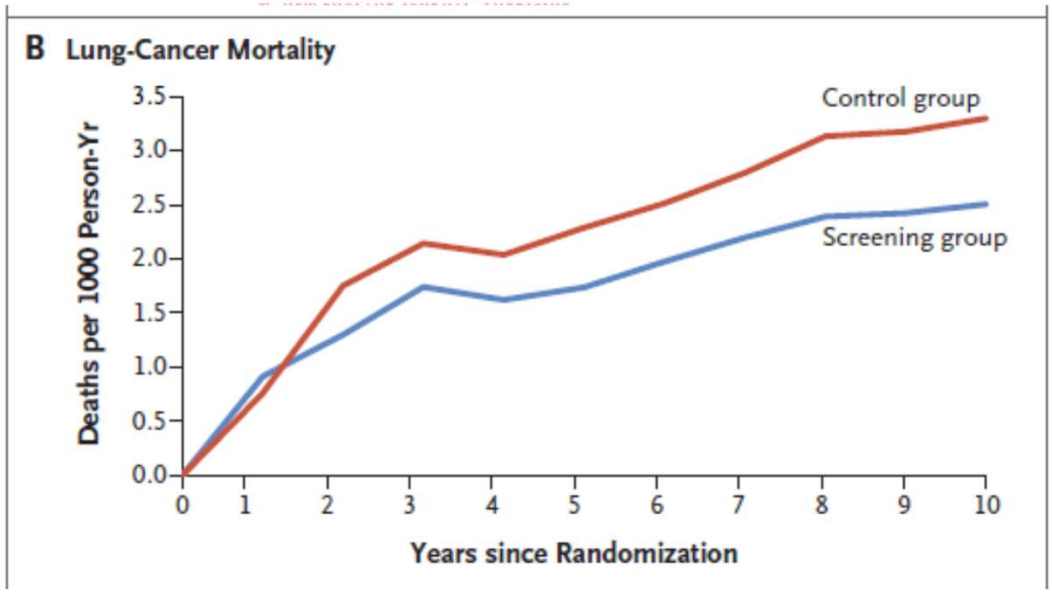


Figure 12.2 Presentations of lung cancer. ADH, antidiuretic hormone.

Korrekte Bildgebung zur Früherkennung

Evidenzlage zum Lungenkrebsscreening



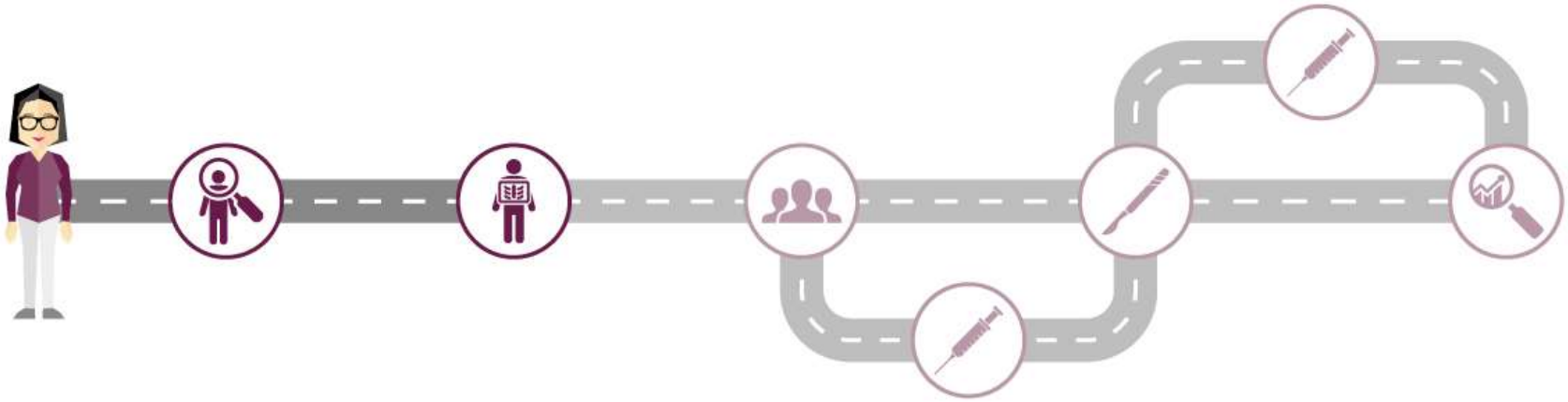


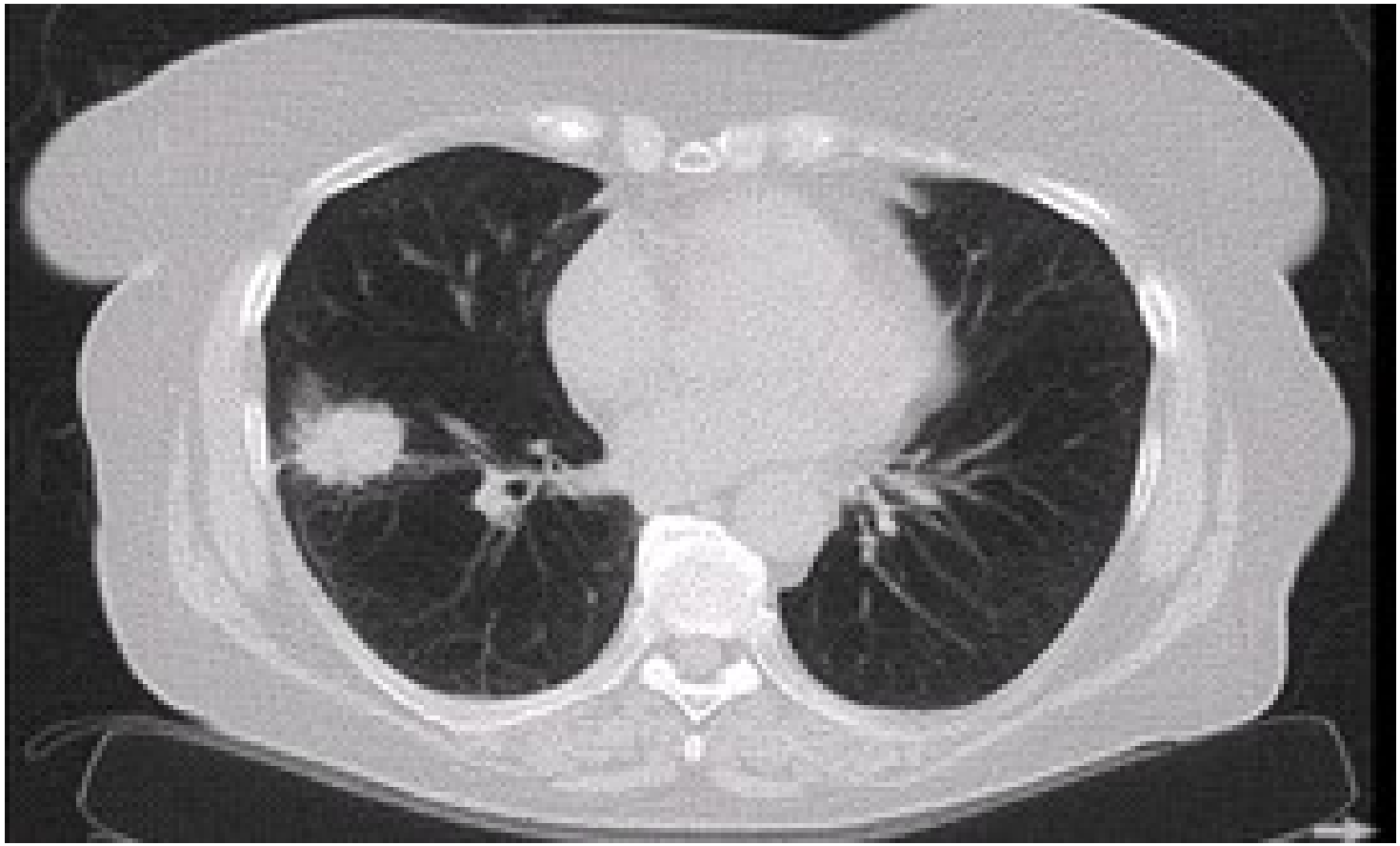
- Relative Risikoreduktion 20%
- Signifikante Senkung der Gesamtmortalität 6,7%

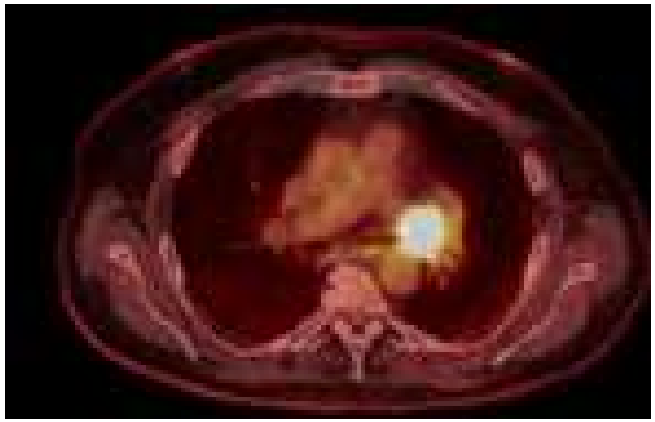
- Relative Risikoreduktion 25%
- Keine signifikante Senkung der Gesamtmortalität

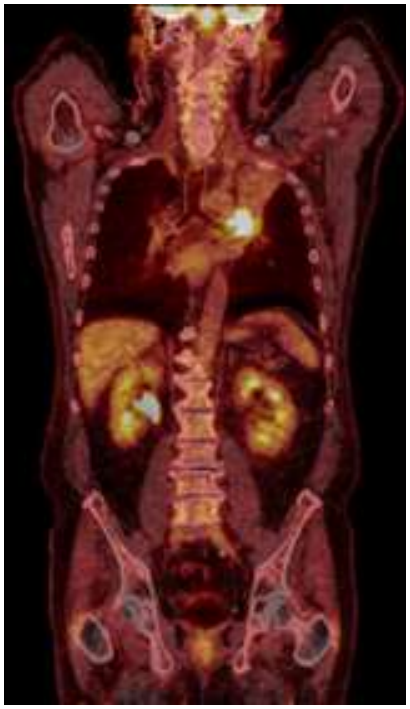
Aberle DR et al.. Reduced lung-cancer mortality with low-dose computed tomographic screening. N Engl J Med. 2011 Aug 4;365(5):395-409; de Koning HJ et al. Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial. N Engl J Med. 2020 Feb 6;382(6):503-513

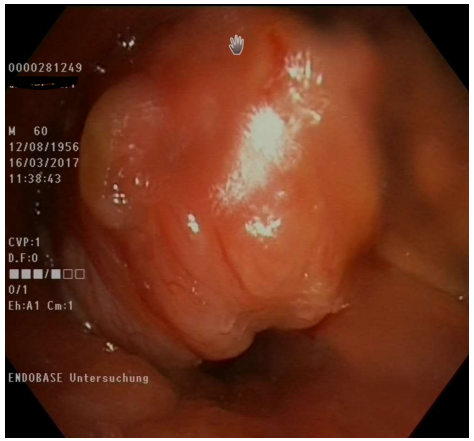
NSCLC Diagnose- Bildgebung, histologische Abklärung, Staging und Tests

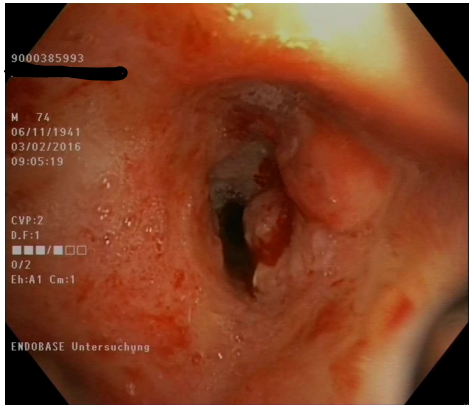




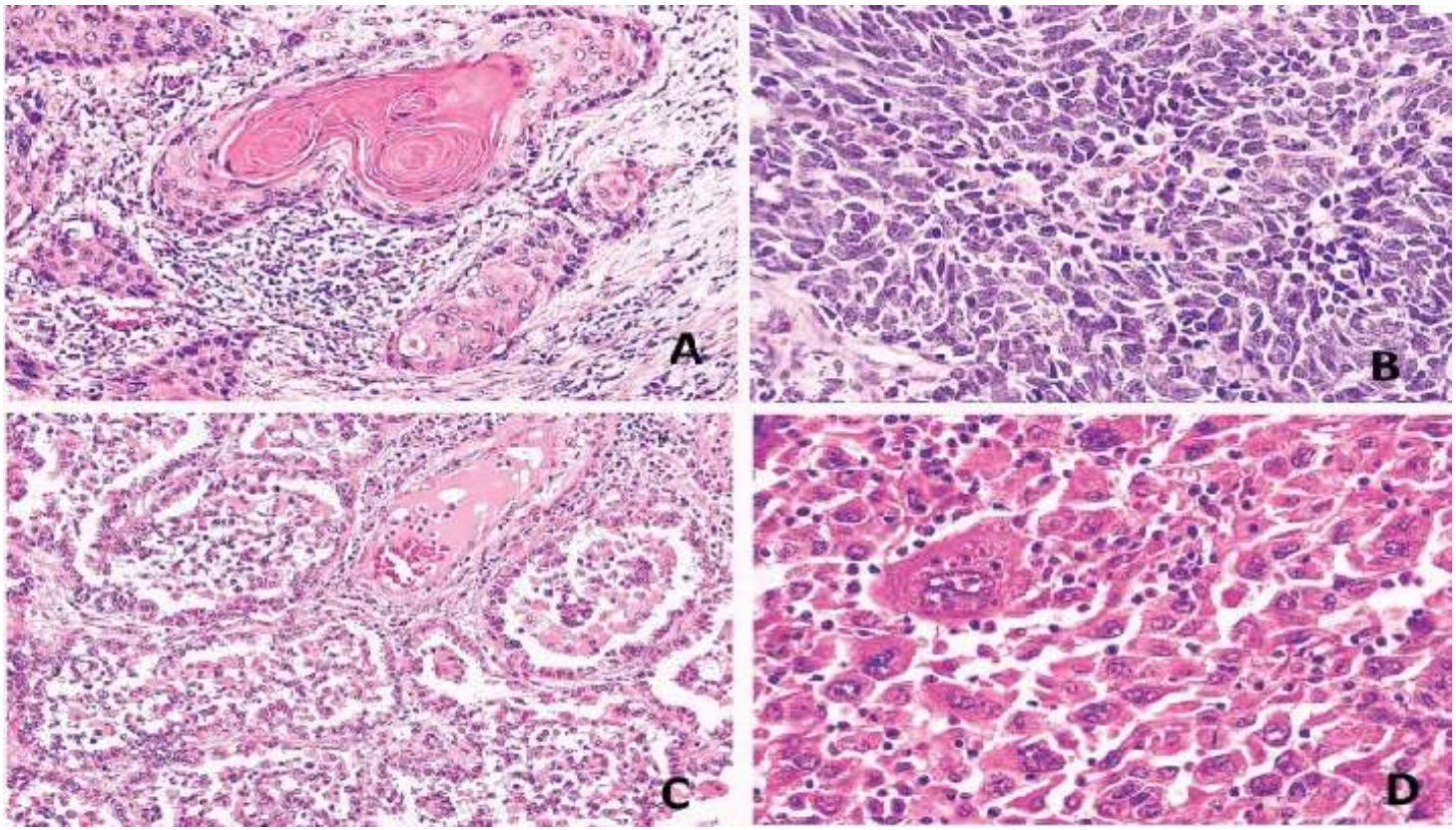




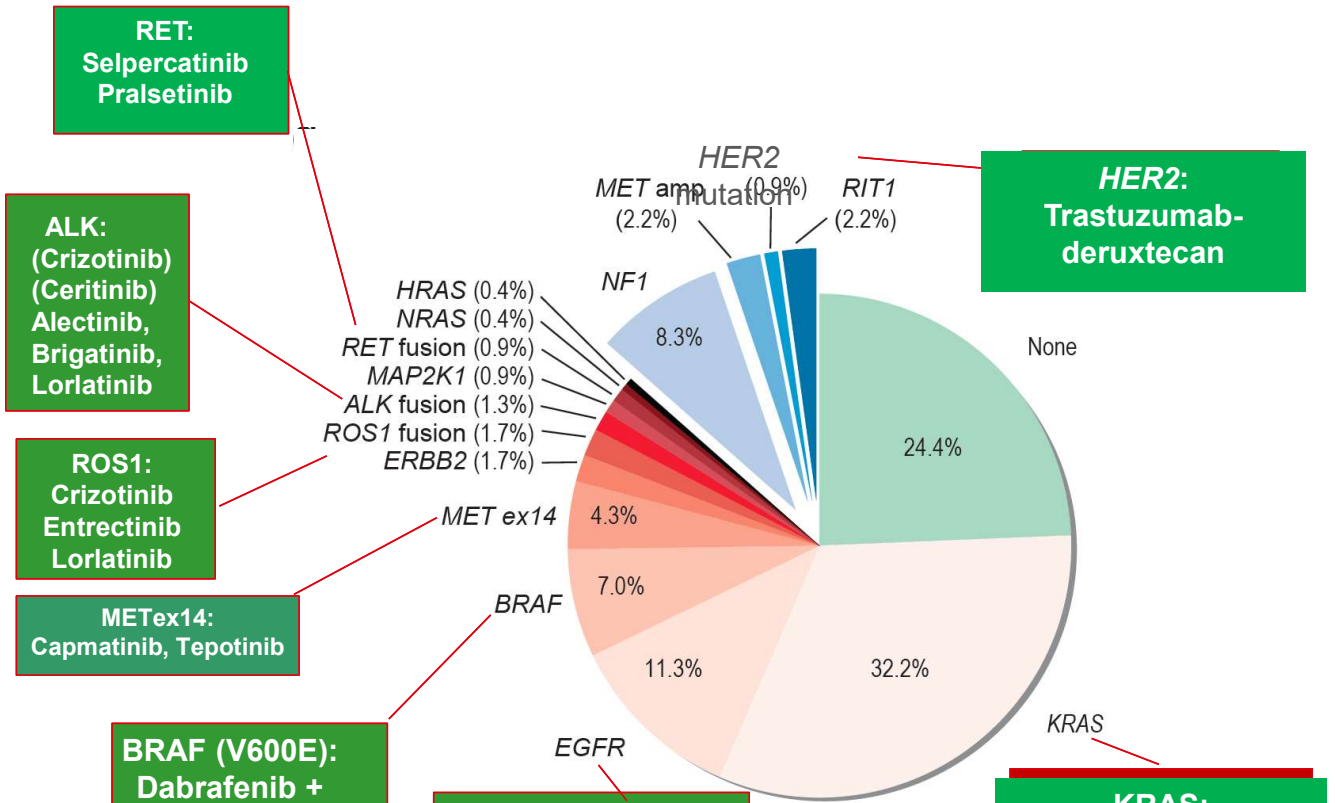

0000281249
M 60
12/08/1956
16/03/2017
11:38:43
CVP:1
D.F:0
0/1
Eh:A1 Cm:1
ENDOBASE Untersuchung


9000385993
M 74
06/11/1941
03/02/2016
09:05:19
CVP:2
D.F:1
0/2
Eh:A1 Cm:1
ENDOBASE Untersuchung

Histologie alleine genügt NICHT

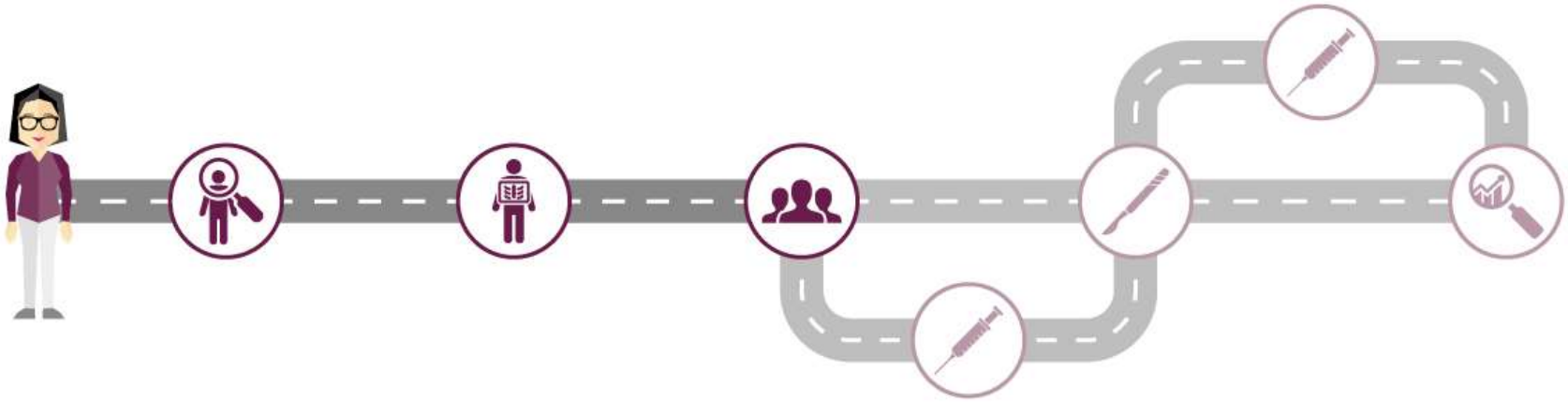


Breite molekularpathologische Testung!



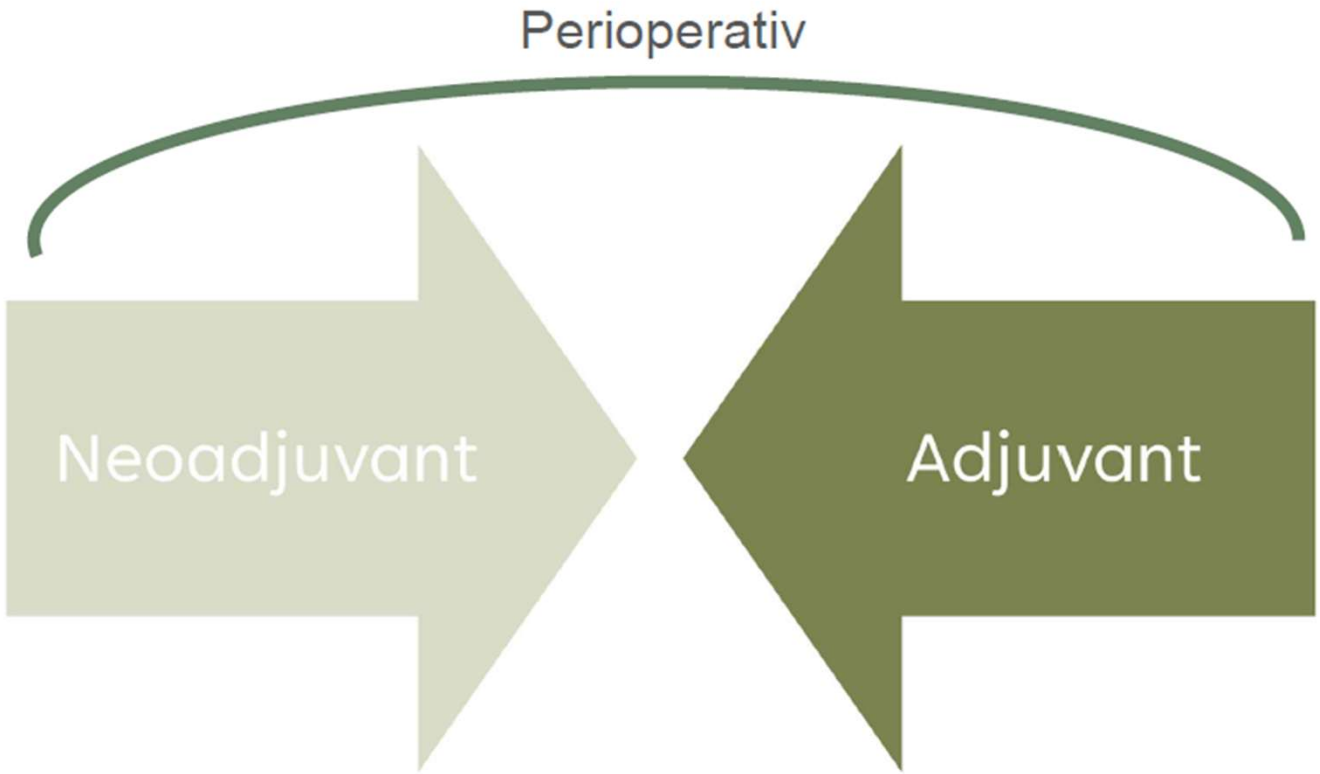
- Probenentnahme zur Histologie
  - Bronchoskopie
  - Transthorakale PE
  - Mediastinoskopie
  - Thorakoskopie
- Staging
  - CT (Thorax +OB)
  - MR cerebrum
  - Skelettszintigraphie
  - FGD-PET
- Erlaubt der Allgemeinzustand eine Therapie?
  - z.B. ECOG, PS, LUFU, Komborbiditäten

Therapieentscheidung: MDT (Multidisziplinäres Tumorboard)



Interdisziplinäre Diskussion ist zentral!

Optimales Behandlungskonzept finden



Übersicht globale Phase III Studien

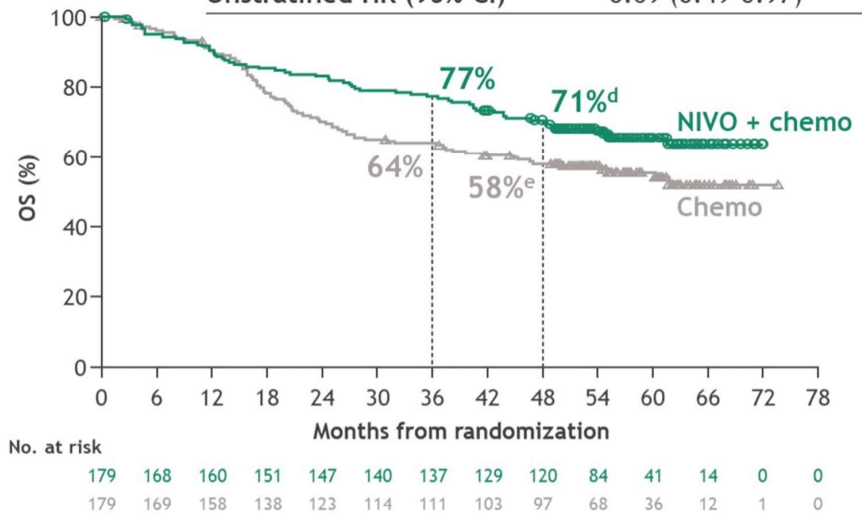
Studien-Name	Substanz	Primärer Endpunkt
CheckMate 816	Nivolumab + CTx	pCR, EFS
CheckMate 77T	Nivolumab + CTx → Nivolumab adjuvant	EFS
KEYNOTE-671	Pembrolizumab + CTx → Pembrolizumab adjuvant	EFS, OS
IMpower030	Atezolizumab + CTx → Atezolizumab adjuvant	MPR, EFS
AEGEAN	Durvalumab + CTx → Durvalumab adjuvant	MPR

Perioperativ

4 Jahres update – CM816

OS

	NIVO + chemo (n = 179)	Chemo (n = 179)
Median OS,[a] mo	NR	NR[c]
HR (98.36% CI); *P* value	0.71 (0.47-1.07); 0.0451[b]	
Unstratified HR (95% CI)	0.69 (0.49-0.97)	



- Patients in the NIVO + chemo arm who had pCR continued to have improved OS vs those who did not (HR [95% CI], 0.08 [0.02–0.34]; 4-year OS rates, 95% vs 63%)

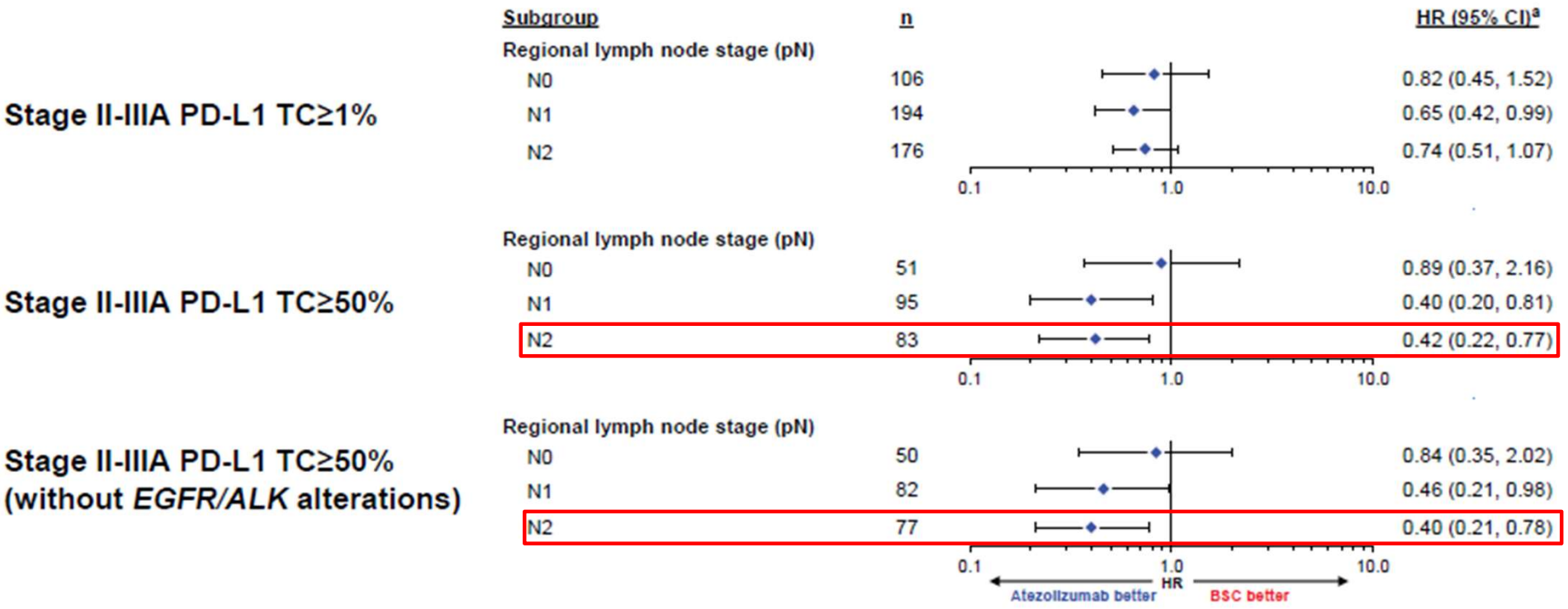
Minimum/median follow-up, 49.1/57.6 months.
[a]Reasons for OS events (deaths) in all treated patients in the NIVO + chemo vs chemo arms (N = 176 in each arm) were disease (23% vs 33%), study drug toxicity (0% vs 2%), unknown (3% vs 3%), and other (7% vs 5%).
[b]Significance boundary for OS (0.0164) was not met at this interim analysis. [c-e]95% CI: [c]50.4-NR; [d]63-77; [e]50-65.

Übersicht Phase III Studien – adjuvantes Setting

Studien-Name	Substanz	Primärer Endpunkt
Immuntherapie		
IMpower 010	Atezolizumab 1 Jahr	DFS
PEARLS/KEYNOTE-091	Pembrolizumab 1Jahr	DFS
Zielgerichtete Therapie		
ADAURA	Osimertinib 3 Jahre	DFS
ALINA	Alectinib 2 Jahre	DFS

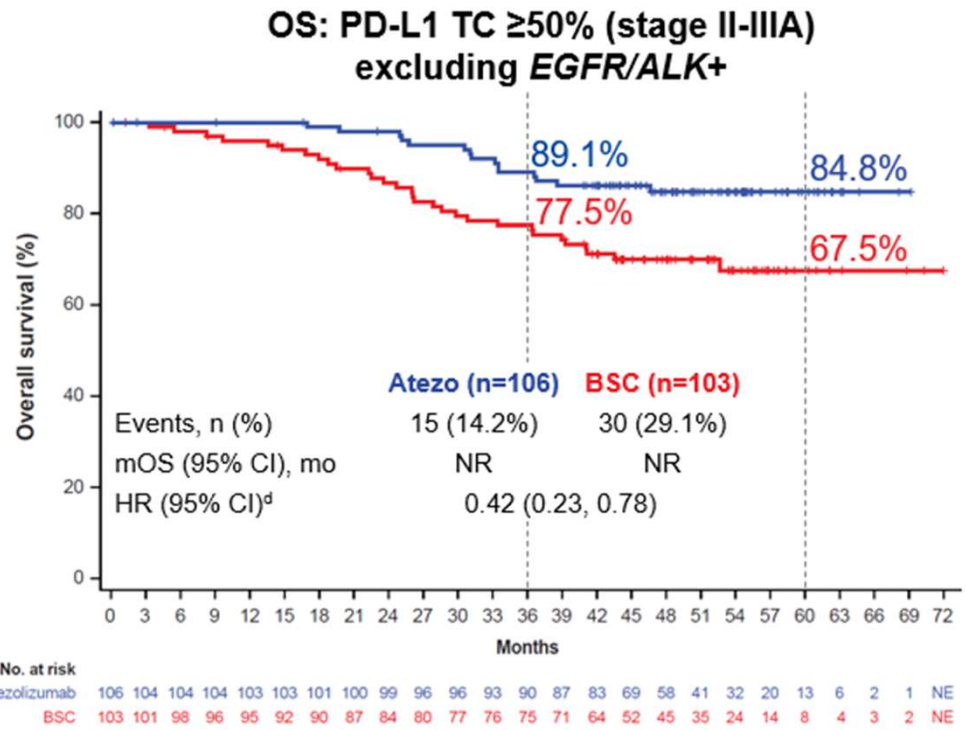
Verbesserung im DFS nach PD-L1 Expression

DFS by regional lymph node stage and PD-L1 status



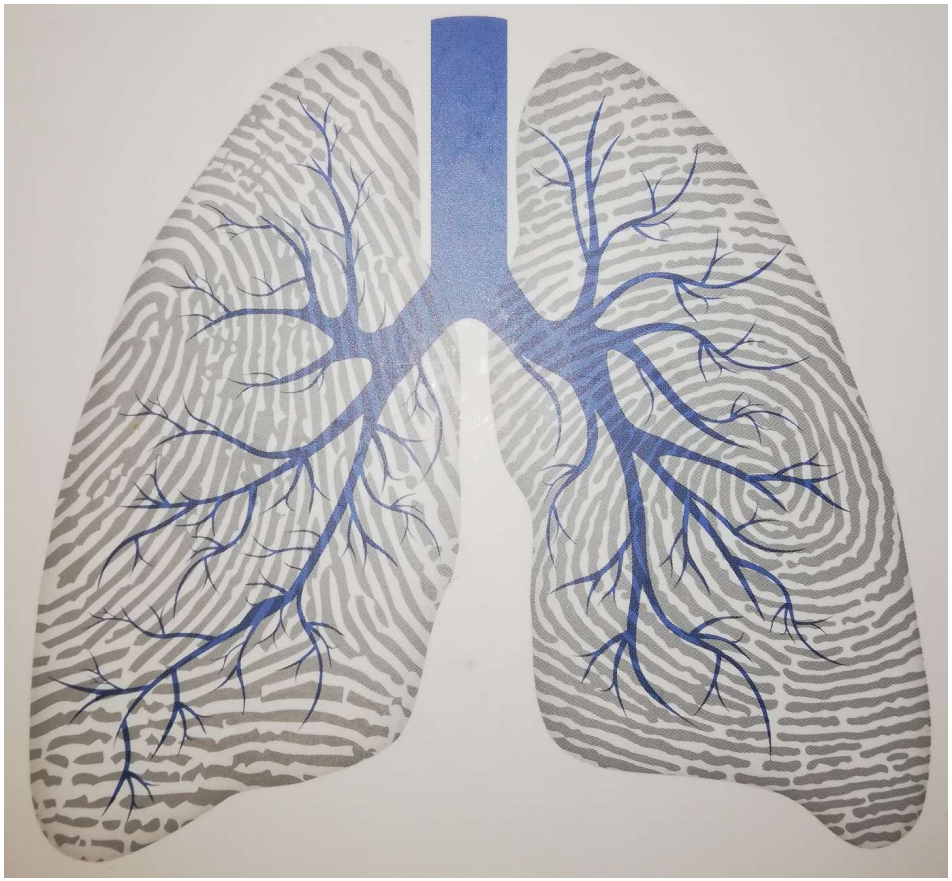
B. Besse, ESMO-IO 2023, Felip et al WCLC 2024

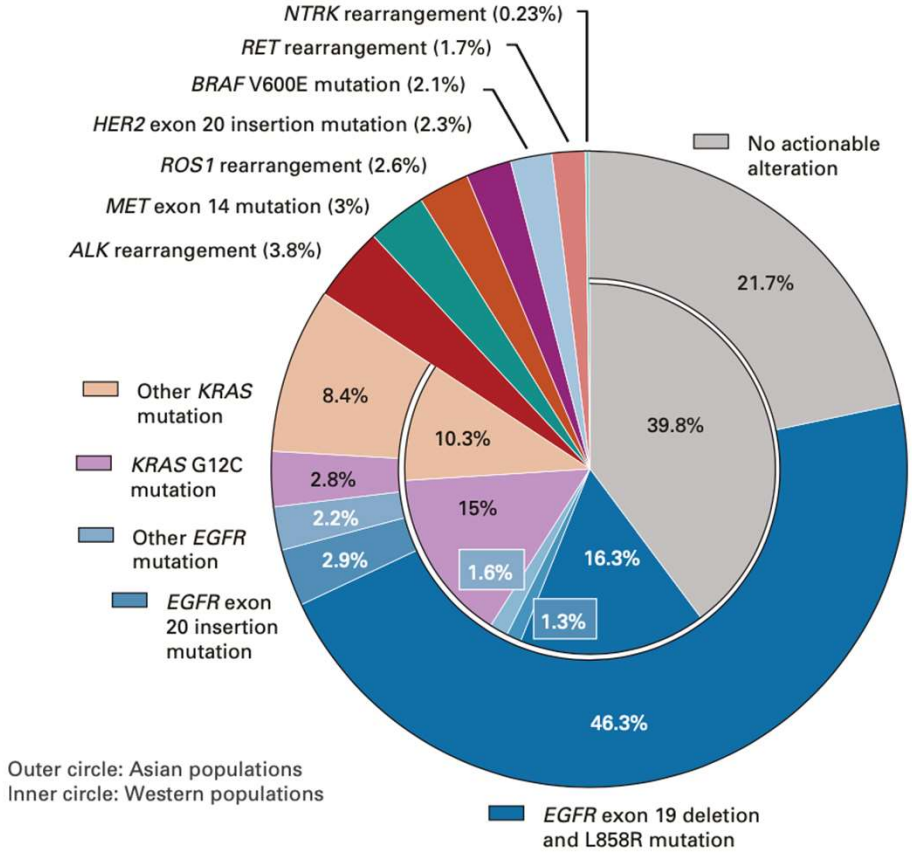
OS Benefit noch unklar



Felip et al WCLC 2022

Lung cancer ≠ lung cancer





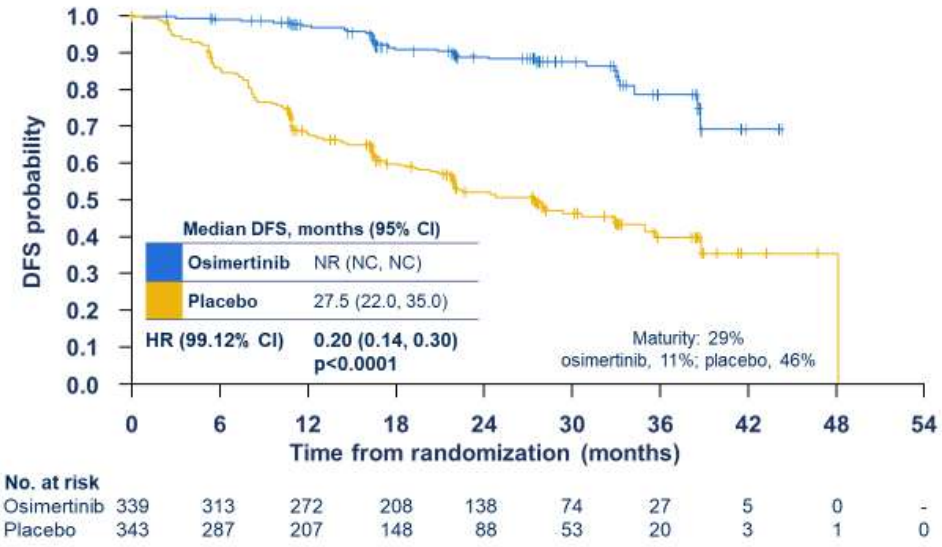
Tan, JCO 2022

DFS Benefit im Vergleich zu Placebo

JOHANNES KEPLER UNIVERSITÄT LINZ | Kepler Universitäts Klinikum

ADAURA primary DFS analysis[1,2] (stage IB–IIIA)*

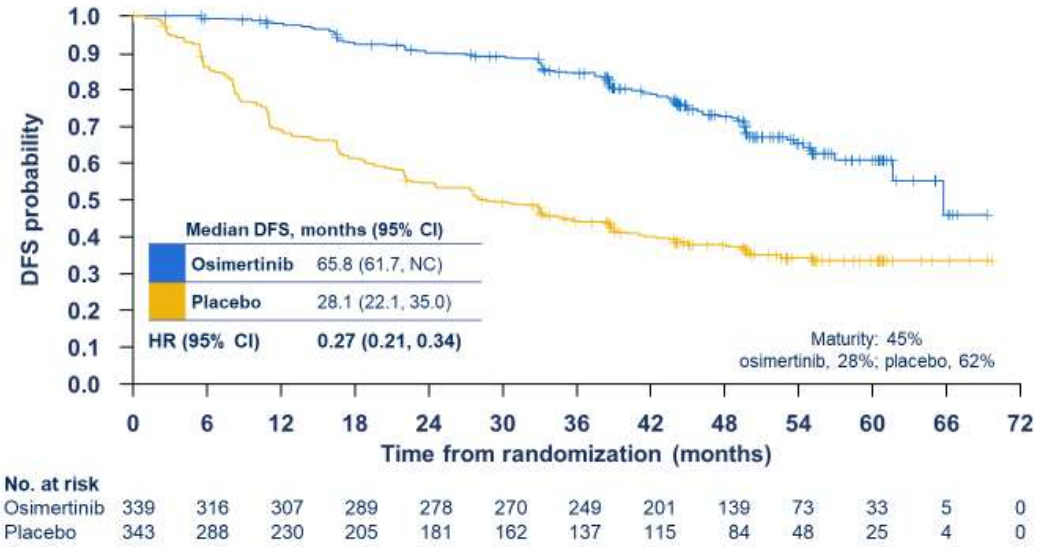
NEJM October 2020



No. at risk										
Osimertinib	339	313	272	208	138	74	27	5	0	-
Placebo	343	287	207	148	88	53	20	3	1	0

ADAURA updated DFS analysis[3,4] (stage IB–IIIA)†

JCO January 2023



No. at risk													
Osimertinib	339	316	307	289	278	270	249	201	139	73	33	5	0
Placebo	343	288	230	205	181	162	137	115	84	48	25	4	0

*Data cut-off: January 17, 2020. †Data cut-off: April 11, 2022.

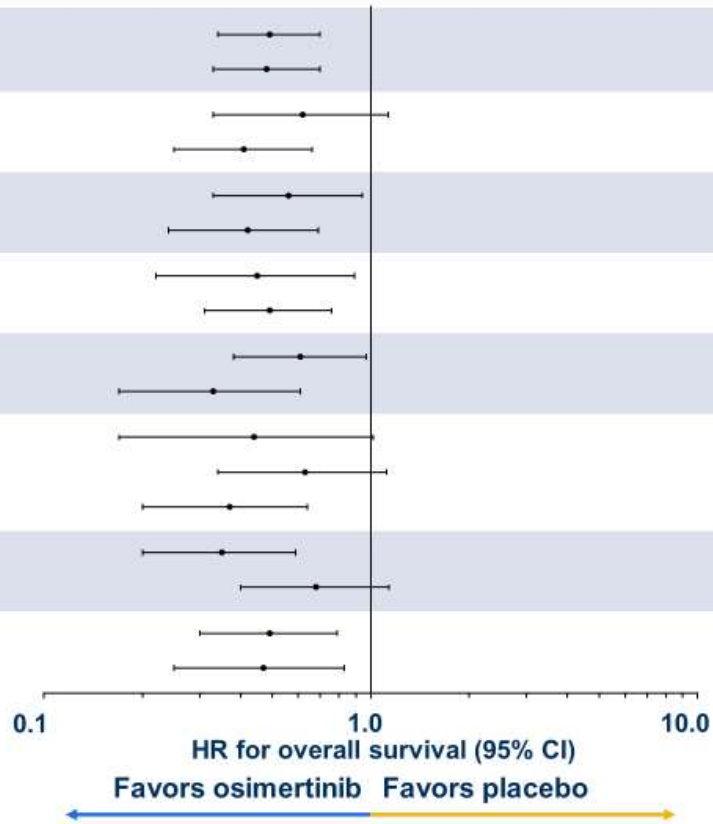
1. Wu et al. N Engl J Med 2020;383:1711–1723; 2. Herbst et al. J Clin Oncol 2020;38(Suppl 18): abstract / oral LBA5; 3. Herbst et al. J Clin Oncol 2023;41:1830–1840; 4. Tsuboi et al. Ann Oncol 2022;33(Suppl 7): abstract / oral LBA47.

PRESENTED BY: Roy S. Herbst

CI, confidence interval; DFS, disease-free survival; EGFRm, epidermal growth factor receptor-mutated; HR, hazard ratio; NC, not calculable; NR, not reached; NSCLC, non-small cell lung cancer

DFS Vorteil übersetzt sich in OS Vorteil!

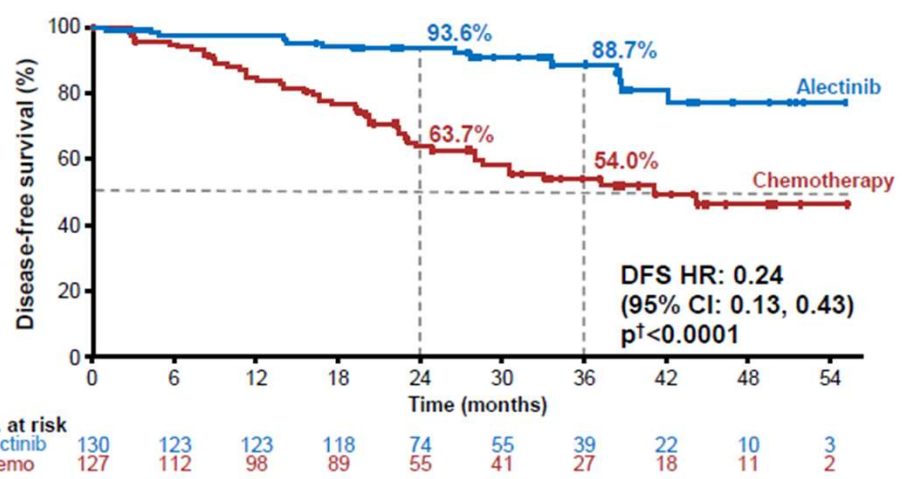
Subgroup		No. of events / patients	HR	95% CI
Overall (N=682)	Stratified log-rank	124 / 682	0.49	0.34, 0.70
	Unadjusted Cox PH	124 / 682	0.48	0.33, 0.70
Sex	Male	42 / 204	0.62	0.33, 1.13
	Female	82 / 478	0.41	0.25, 0.66
Age	<65 years	60 / 380	0.56	0.33, 0.94
	≥65 years	64 / 302	0.42	0.24, 0.69
Smoking history	Yes	34 / 194	0.45	0.22, 0.89
	No	90 / 488	0.49	0.31, 0.76
Race	Asian	73 / 434	0.61	0.38, 0.97
	Non-Asian	51 / 248	0.33	0.17, 0.61
Stage*	IB	24 / 212	0.44	0.17, 1.02
	II	46 / 236	0.63	0.34, 1.12
	IIIA	54 / 234	0.37	0.20, 0.64
EGFR mutation	Ex19del	65 / 378	0.35	0.20, 0.59
	L858R	59 / 304	0.68	0.40, 1.14
Adjuvant chemotherapy	Yes	74 / 410	0.49	0.30, 0.79
	No	50 / 272	0.47	0.25, 0.83



ALINA primary analysis

Treatment with adjuvant alectinib resulted in a significant DFS benefit and clinically meaningful CNS-DFS benefit compared with chemotherapy in patients with resected stage IB–IIIA *ALK*+ NSCLC*[1,2]

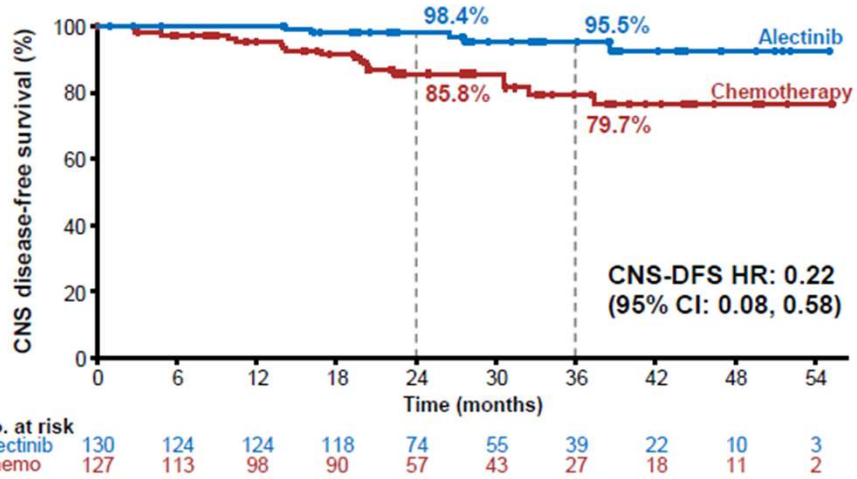
DFS in stage IB–IIIA (ITT)
Primary endpoint



No. at risk

Alectinib	130	123	123	118	74	55	39	22	10	3
Chemo	127	112	98	89	55	41	27	18	11	2

CNS-DFS in stage IB–IIIA (ITT)
Exploratory endpoint

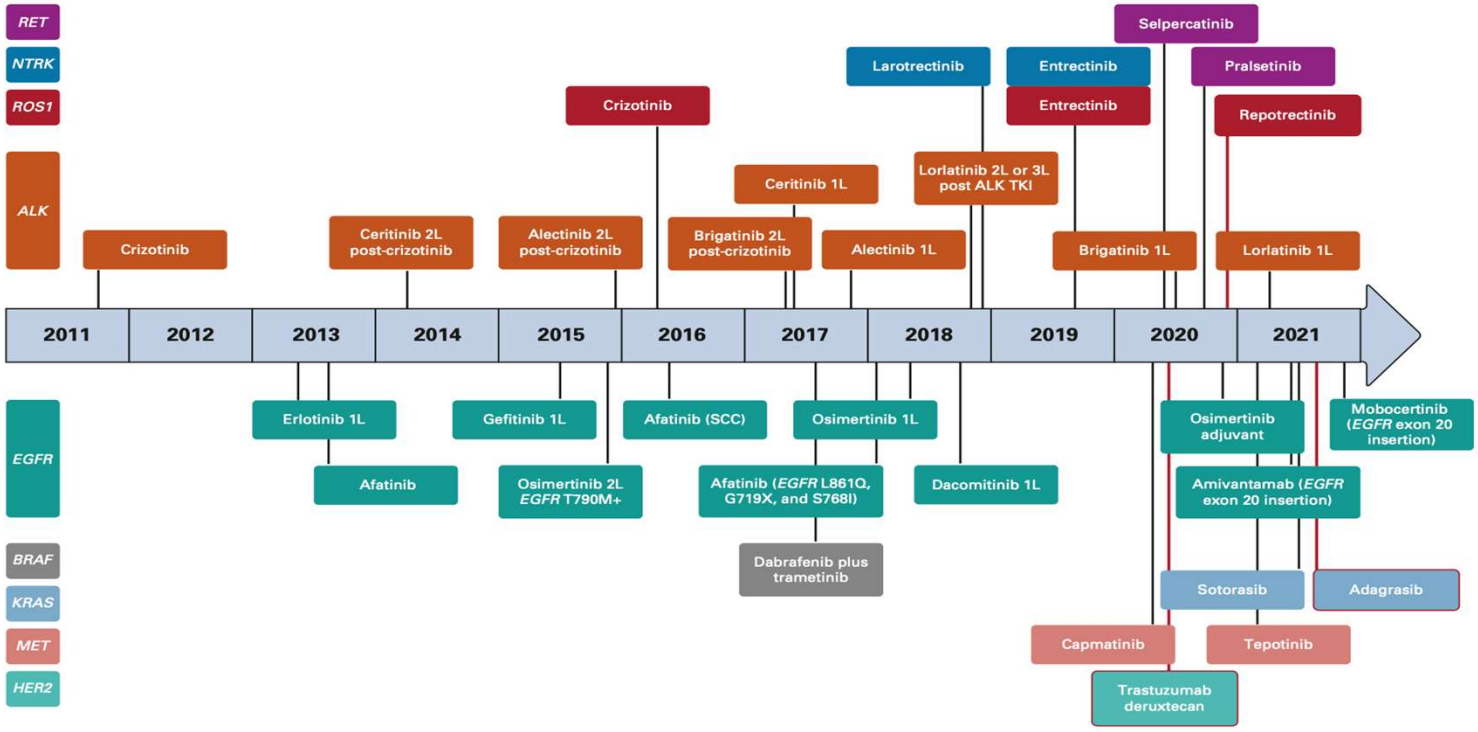


No. at risk

Alectinib	130	124	124	118	74	55	39	22	10	3
Chemo	127	113	98	90	57	43	27	18	11	2

Horunouichi H et al, WCLC 2024

Early use of targeted therapies!

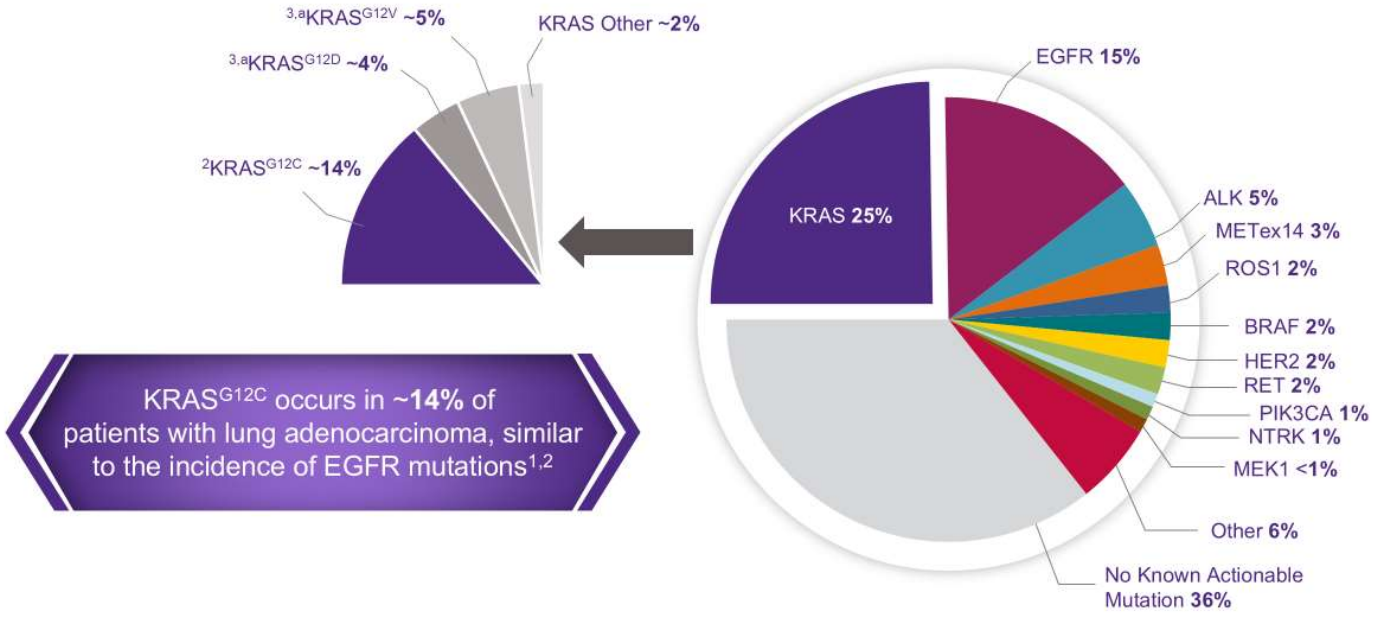


Tan, JCO 2022

KRAS ist am häufigsten!

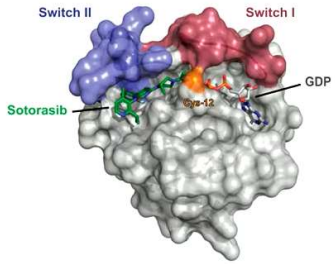
KRAS is the Most Prevalent Oncogenic Driver in NSCLC

KRAS mutations account for 25% of mutations in lung adenocarcinoma and are generally mutually exclusive with other oncogenic driver mutations[1]



[a]Value for all NSCLC histologies.
ALK, anaplastic lymphoma kinase; BRAF, B-Raf proto-oncogene, serine/threonine kinase; EGFR, epidermal growth factor receptor; HER2, human epidermal growth factor receptor 2; KRAS, Kirsten rat sarcoma viral oncogene homolog; MEK1, mitogen-activated protein kinase kinase 1; MET, mesenchymal-epithelial transition proto-oncogene; NSCLC, non-small cell lung cancer; NTRK, neurotrophic receptor tyrosine kinase; PIK3CA, phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha; RET, ret proto-oncogene; ROS1, ROS proto-oncogene 1.

„Undruggable“ target - KRAS

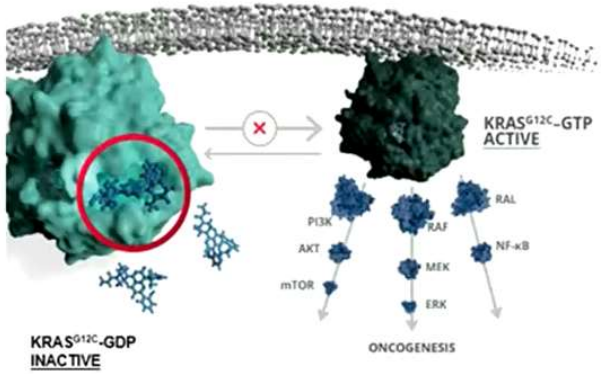


Allele specific inhibitors maintain KRAS in GDP-bound “inactive” state

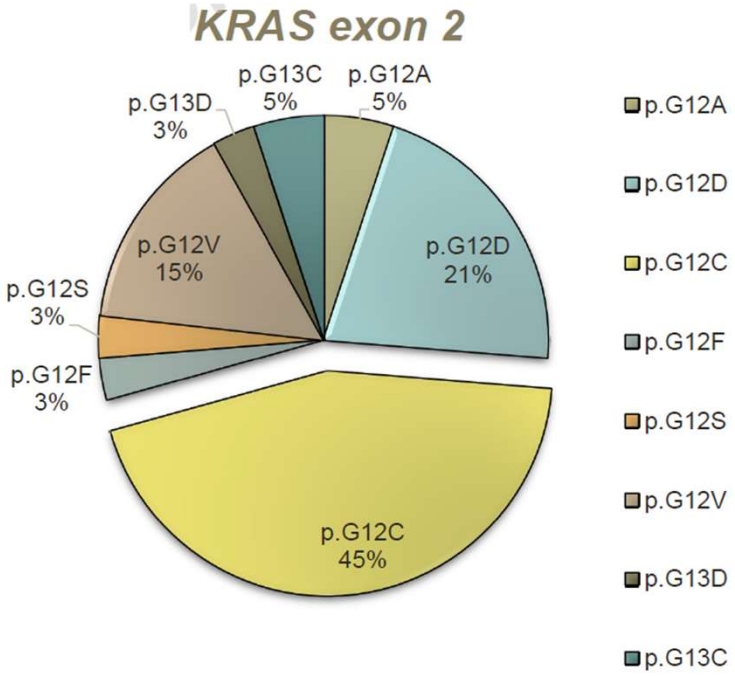
2013

Discovery of switch II “pocket”

With cysteine binding (G12C)



AOU San Luigi 2019 – Slide Novello 2021.



KRAS - bad prognosis!

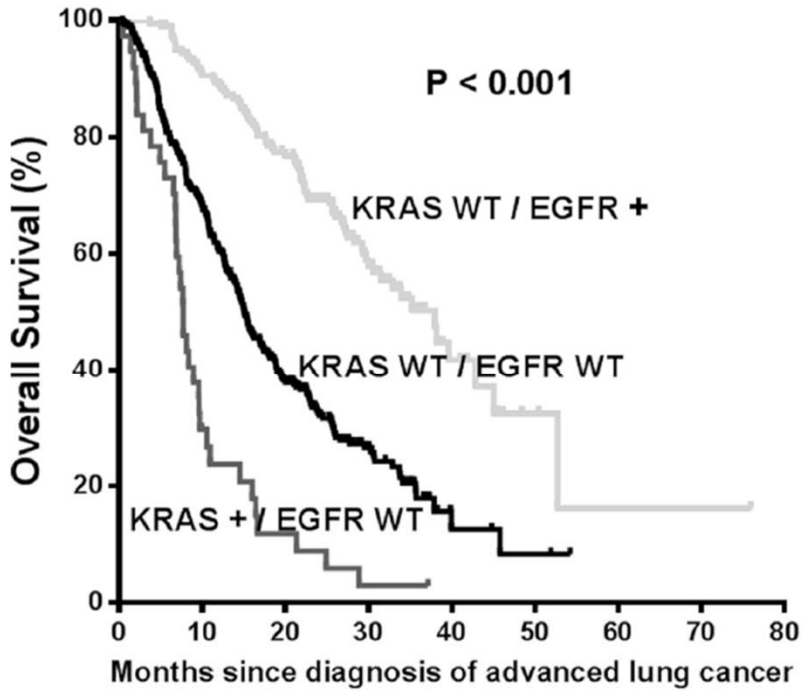


Figure 2. Overall survival by KRAS and EGFR mutation status.

Sun, PLOS ONE 2013

KRAS patient characteristica

	KRAS G12C mutant NSCLC			All NSCLC
	Flatiron* (n = 743)	AACR Genie‡ (n = 416)	CRISP† (n = 160)	Flatiron* (N = 7,069)
Median age at diagnosis, years	68	68¥	66	68
Female gender, %	61%	64%	44%	50%
Current/former smoker, %	97%	97%	93%	82%
Non-squamous NSCLC, %	91%	88%	99%	76%
Distant metastases at diagnosis, %	86%	NR	94%	84%
STK11 Co-mutation, %	22%	24%	NR	12%
KEAP1 Co-mutation, %	7%	10%	NR	6%

Patients with advanced *KRAS* G12C-mutated NSCLC tend to be a current or former smoker with non-squamous histology; *STK11* co-mutation occurs in almost one-quarter of cases

AACR, American Association for Cancer Research; **CRISP,** Clinical Research platform Into molecular testing, treatment and outcome of non-Small cell lung carcinoma Patients; **ECH,** erythroid cell-derived protein with cap and collar homology; **GENIE,** Genomics Evidence Neoplasia Information Exchange; **KEAP1,** Kelch-like ECH associated protein 1; **KRAS,** Kirsten rat sarcoma; **NR,** not reported; **NSCLC,** non-small cell lung cancer; **STK11,** serine/threonine kinase 11.

*Data from an analysis of the Flatiron Health-Foundation Medicine Clinico-Genomic Database (FH-FMI CGDB). FH-FMI CGDB includes over 400,00 patient samples from approximately 280 oncology practices in the US and integrates comprehensive genomic profiling results with clinical data from electronic health records (EHRs). The analysis identified N = 7,069 patients diagnosed with NSCLC between January 1, 2011 and March 31, 2019, with at least 6 months of follow-up, of which n = 743 had the *KRAS G12C* mutation. ‡Data from an analysis of the AACR Project GENIE Database that included 416 patients with the *KRAS G12C* mutated NSCLC, of which 270 (65%) were diagnosed in 2015 or later. †Data from an analysis of the German prospective, observational, nationwide CRISP Registry that includes 4,032 patients with advanced NSCLC between December, 2015 and June, 2019. ¥Median age at advanced diagnosis.

1. Spira AI, et al. *Lung Cancer.* 2021; in press. DOI: https://doi.org/10.1016/j.lungcan.2021.05.026.
2. Ricciuti B, et al. Oral presentation at the AACR Annual Meeting 2021. Virtual Meeting April 10-15, 2021. Abstract #102. **3.** Sebastian M, et al. *Lung Cancer.* 2021;154:51-61.

Wirksame KRAS Inhibitoren!

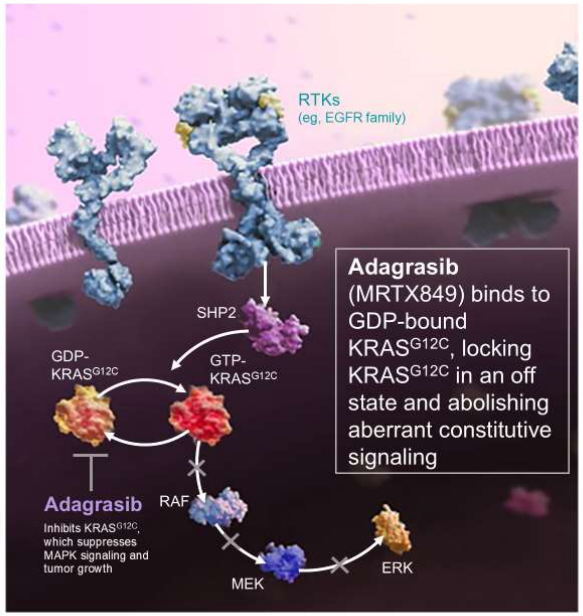
Adagrasib: a KRAS^{G12C} Inhibitor Selected for Specific Properties

Desired Properties for Adagrasib[1,2]

- Potent covalent inhibitor of KRAS^{G12C} (cellular IC_{50}: ~5 nM)[1]
- High selectivity (>1000X) for the mutant KRAS^{G12C} protein versus WT KRAS
- Favorable PK properties, including:
  - Long half-life of 23 hours, dose-dependent PK, and CNS penetration

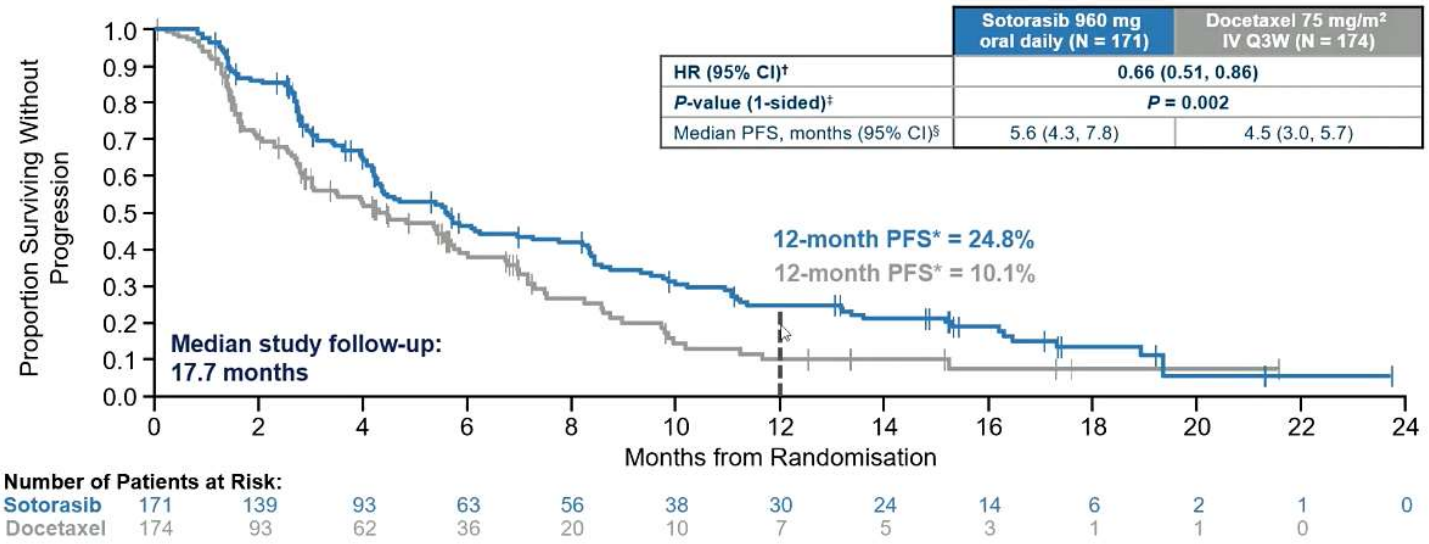
Continuous Exposure Enables Inhibition of KRAS^{G12C} Throughout the Dosing Interval

- The KRAS protein cycles between GTP-on and GDP-off states[3]
- The KRAS protein frequently regenerates at a rapid rate of protein resynthesis and turnover, with an approximate half-life of 24 hours[2,4]



CNS, central nervous system; GDP, guanosine diphosphate; GTP, guanosine triphosphate IC_{50}, half maximal inhibitory concentration; PK, pharmacokinetic; RTK, receptor tyrosine kinase; WT, wild type
1. Jänne PA. et al. Presented at EORTC-NCI-AACR 2020. 2. Hallin J. et al. Cancer Discov 2019. 3. Bos JL. et al. Cell 2007. 4. Shukla S. et al. Neoplasia 2014

Hervorrangendes Ansprechen!



	Sotorasib 960 mg oral daily (N = 171)	Docetaxel 75 mg/m² IV Q3W (N = 174)
HR (95% CI)†	0.66 (0.51, 0.86)	
P-value (1-sided)‡	*P* = 0.002	
Median PFS, months (95% CI)§	5.6 (4.3, 7.8)	4.5 (3.0, 5.7)

CodeBreaK 200 met its primary endpoint with sotorasib demonstrating superior PFS over docetaxel (HR 0.66, *P* = 0.002); 12-month PFS rate was 24.8% for sotorasib and 10.1% for docetaxel

*PFS rates estimated using Kaplan-Meier method; ITT population.
†HR and 95% CIs estimated using a stratified Cox proportional hazards model.
‡*P*-value calculated using a stratified log-rank test.
§Medians estimated using Kaplan-Meier method; 95% CIs estimated using the method by Klein and Moeschberger with log-log transformation.

PARIS 2022 ESMO congress

Melissa L. Johnson, MD
Twitter: @MLJohnsonMD2

Patientin, 69 Jahre - Anamnese

Gewichtsverlust, B-Symptomatik, Kollaps → Notaufnahme

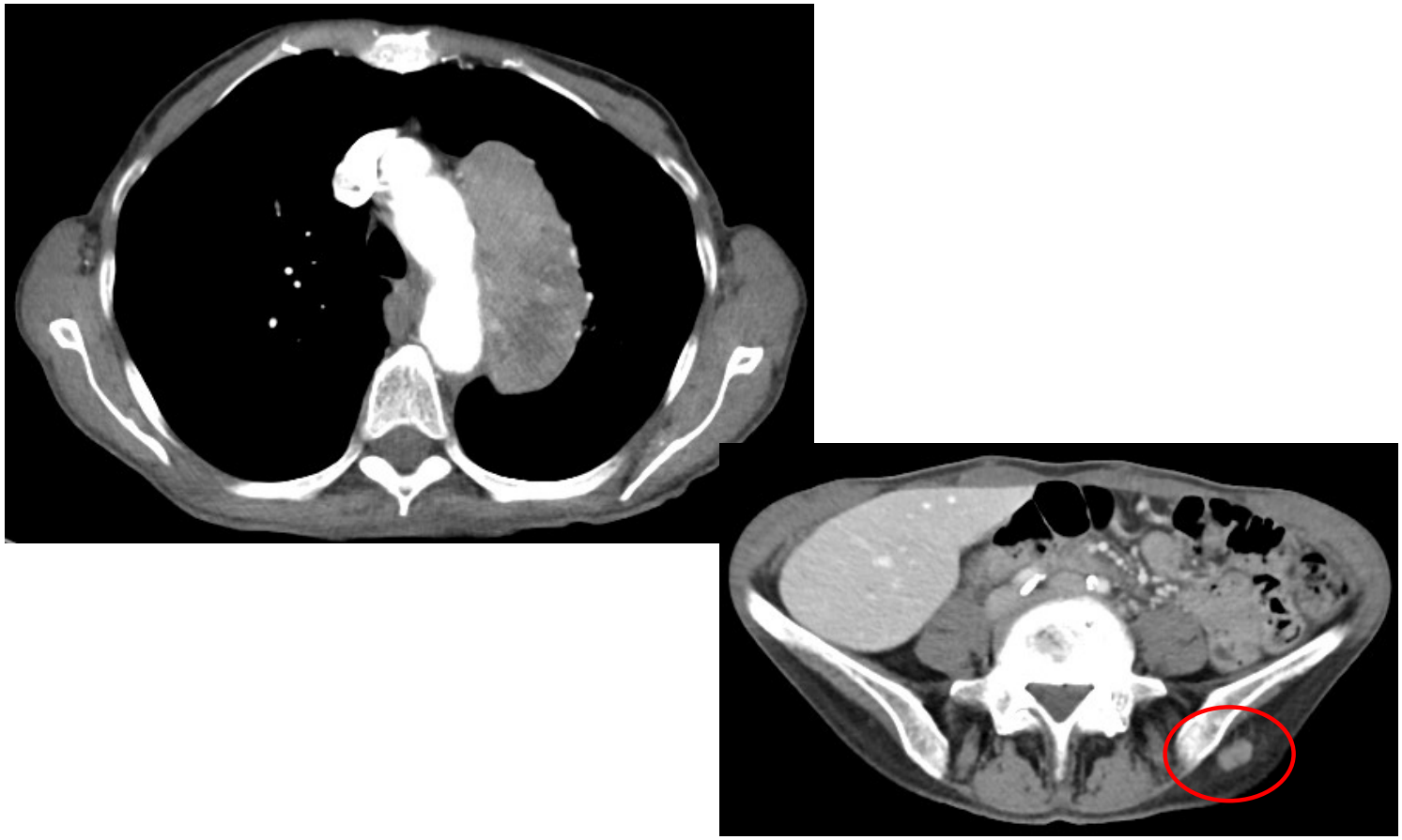
Röntgen - Raumforderung links mediastinal → Übernahme zur weiteren Abklärung

- CT von Thorax und Oberbauch
- PET CT
- cMRI

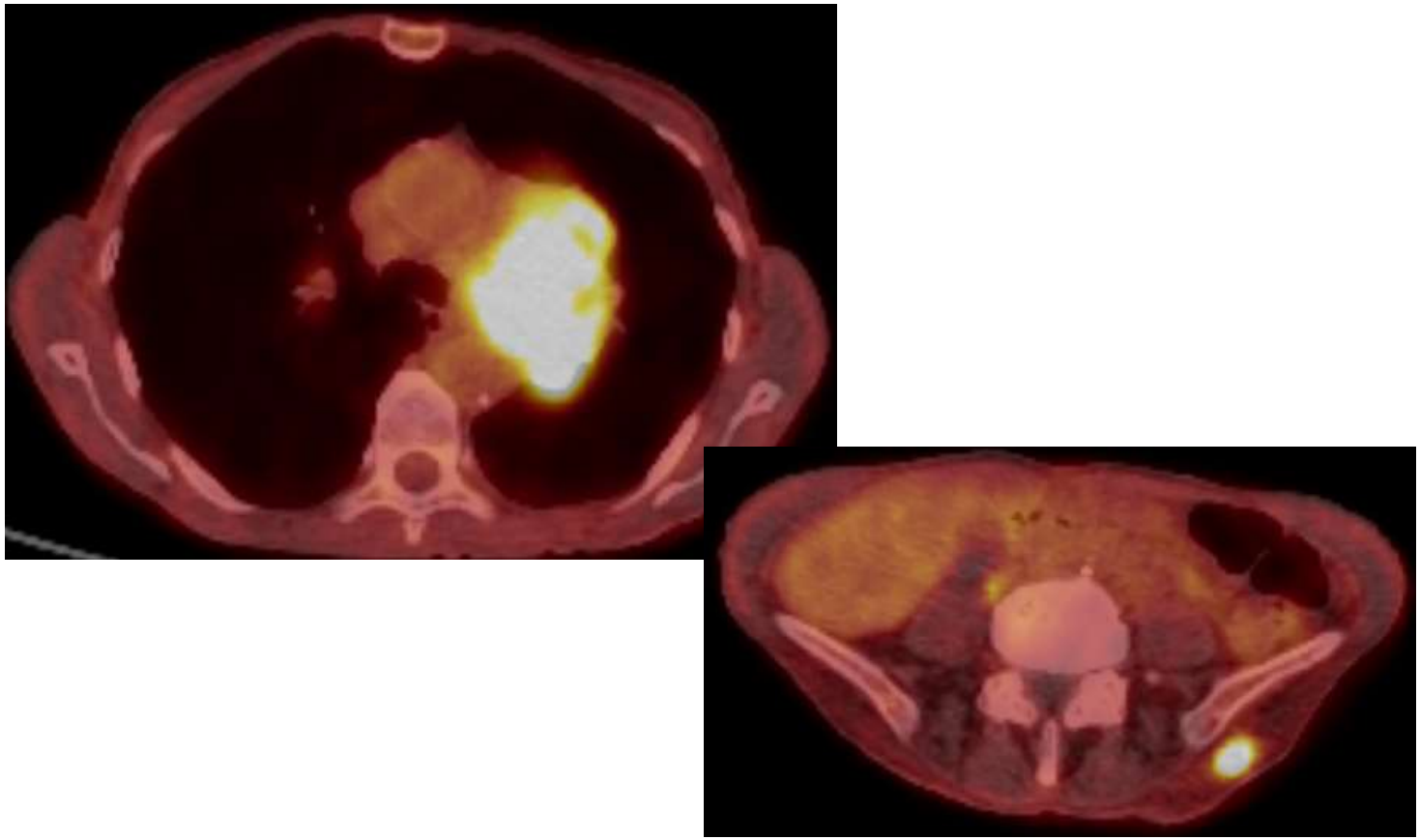
Anämie Hb 8,8 g/dl

- Gatroskopie/Coloskopie

CT Untersuchung Mai 2021

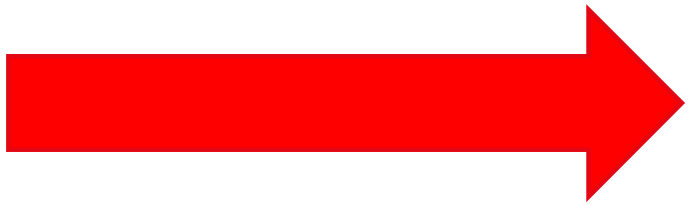


PET CT Untersuchung Mai 2021



Histologische Sicherung

Bronchoskopie mit EBUS-gezielter Punktion der einschallbaren Raumforderung, schnellzytologisch keine Tumorzellen



Exzision der PET-positiven fraglichen Metastase links gluteal

Histologie: Weichteilmetastase eines schlecht differenzierten, nicht kleinzelligen Karzinoms, in erster Linie partiell großzelliges Adenokarzinom

IHC: PD-L1 leicht positiv: TPS 5%

Molekularpathologische Untersuchungen:
EGFR, BRAF, ERBB2 (Her2): Wildtyp
Mutation im KRAS-Gen: c.34G>T(G12C), Exon2 (Allelfrequenz 39%)

RNA Fusionsanalysen:
Keine ALK-, RET-, ROS1-, NTRK- oder MET-Fusion

cT4 N2 M1c (NNR links und Haut/gluteal) - Stadium IVB

Therapie-Einleitung

Chemo (80%)/Immuntherapie Carboplatin/Pemetrexed/Pembrolizumab besprochen - vorausgesetzt BB stabil, Tumorboard 10.6.2021

1. Zyklus Carboplatin/Pemetrexed(80%)/Pembrolizumab am 18.6.21
2. Zyklus aufgeschoben bei prolongierter normochromer, normozytärer Anämie

2. Zyklus Carbo/Pem/Pem am 22.07.2021

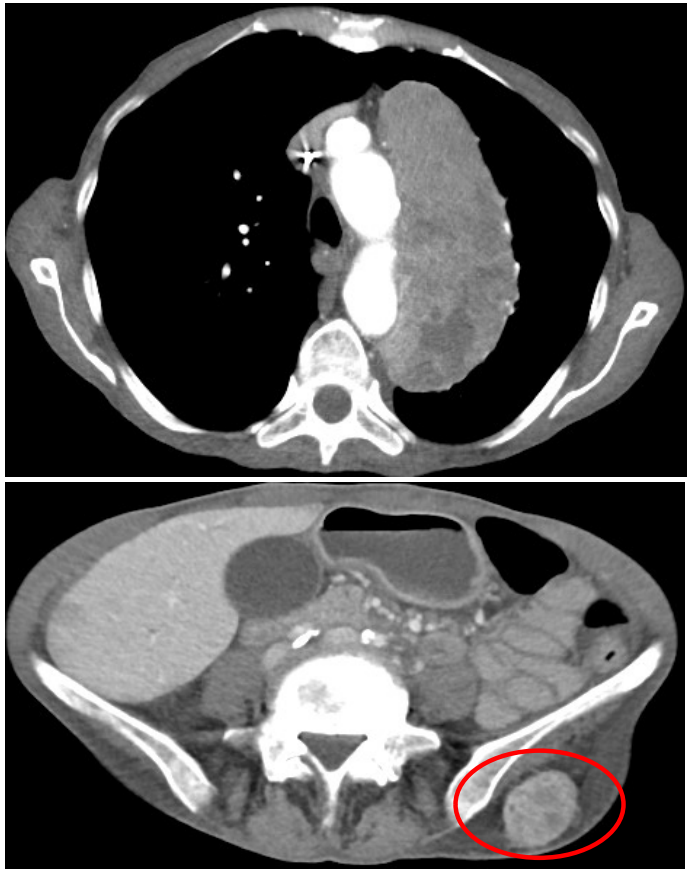
Reduzierter AZ – schlechte Therapieverträglichkeit!

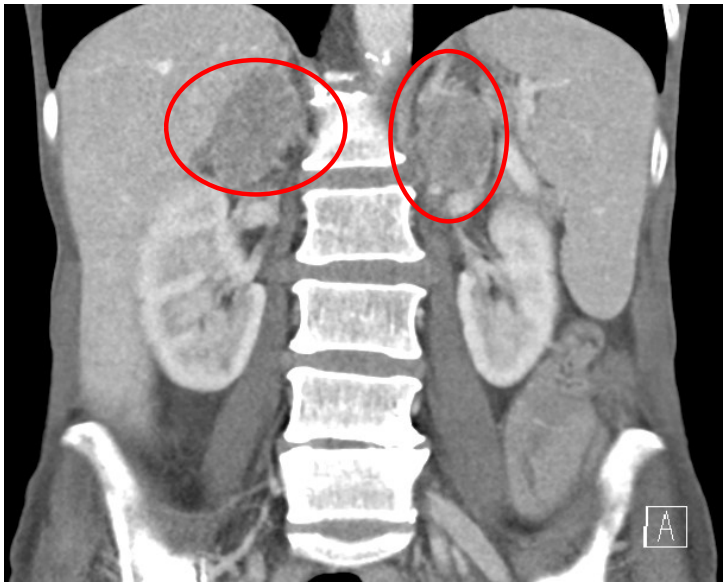
Anfang August ungeplante Aufnahme über NFA:
Hb 5,9 g/dl, Leukozyten 3,09 g/l, Neutrophile 1,83 g/l, Thrombozyten normal

vorgezogenes Restaging: thorakal sowie abdominell deutlich progredient

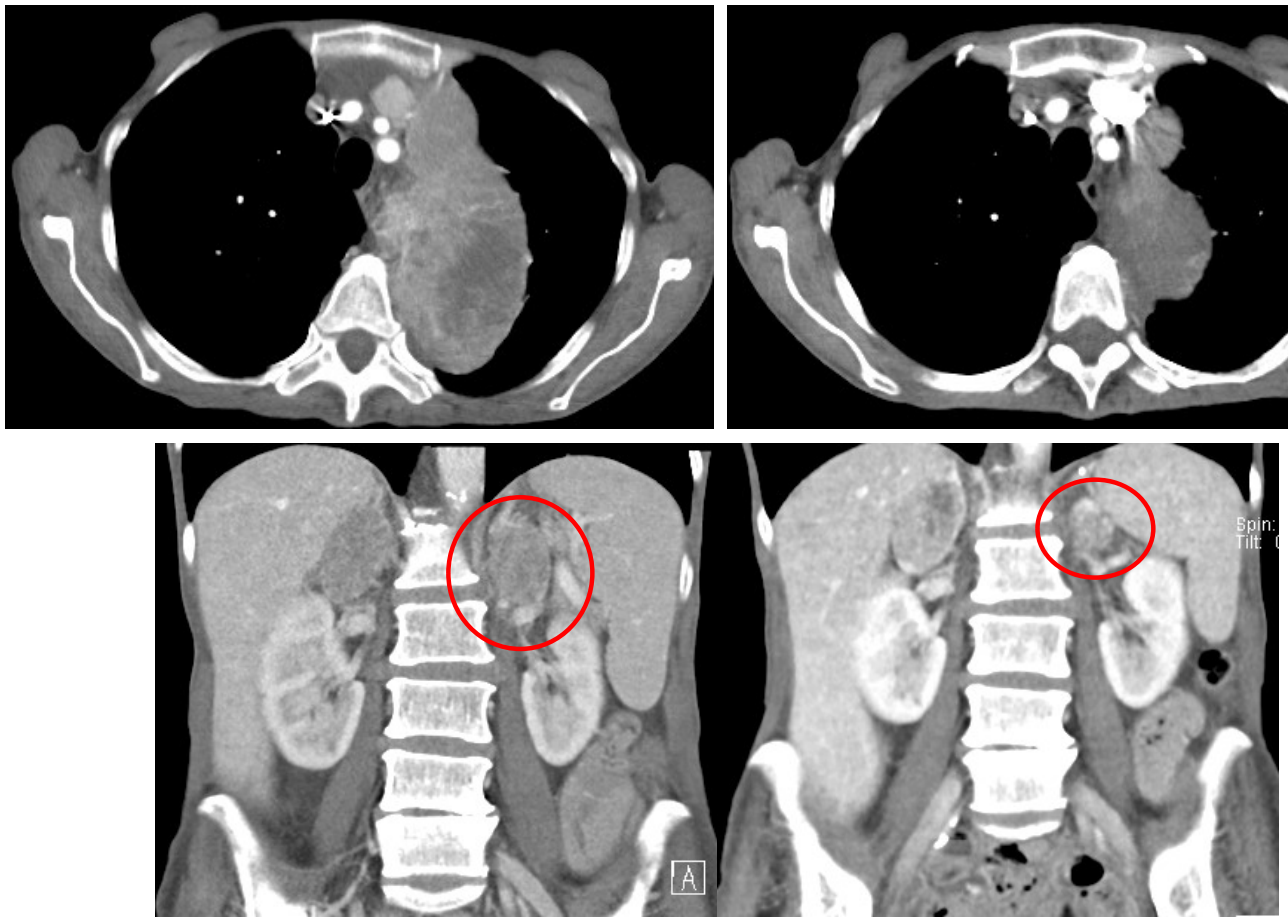
→ Therapieabbruch!

Tumorprogredienz

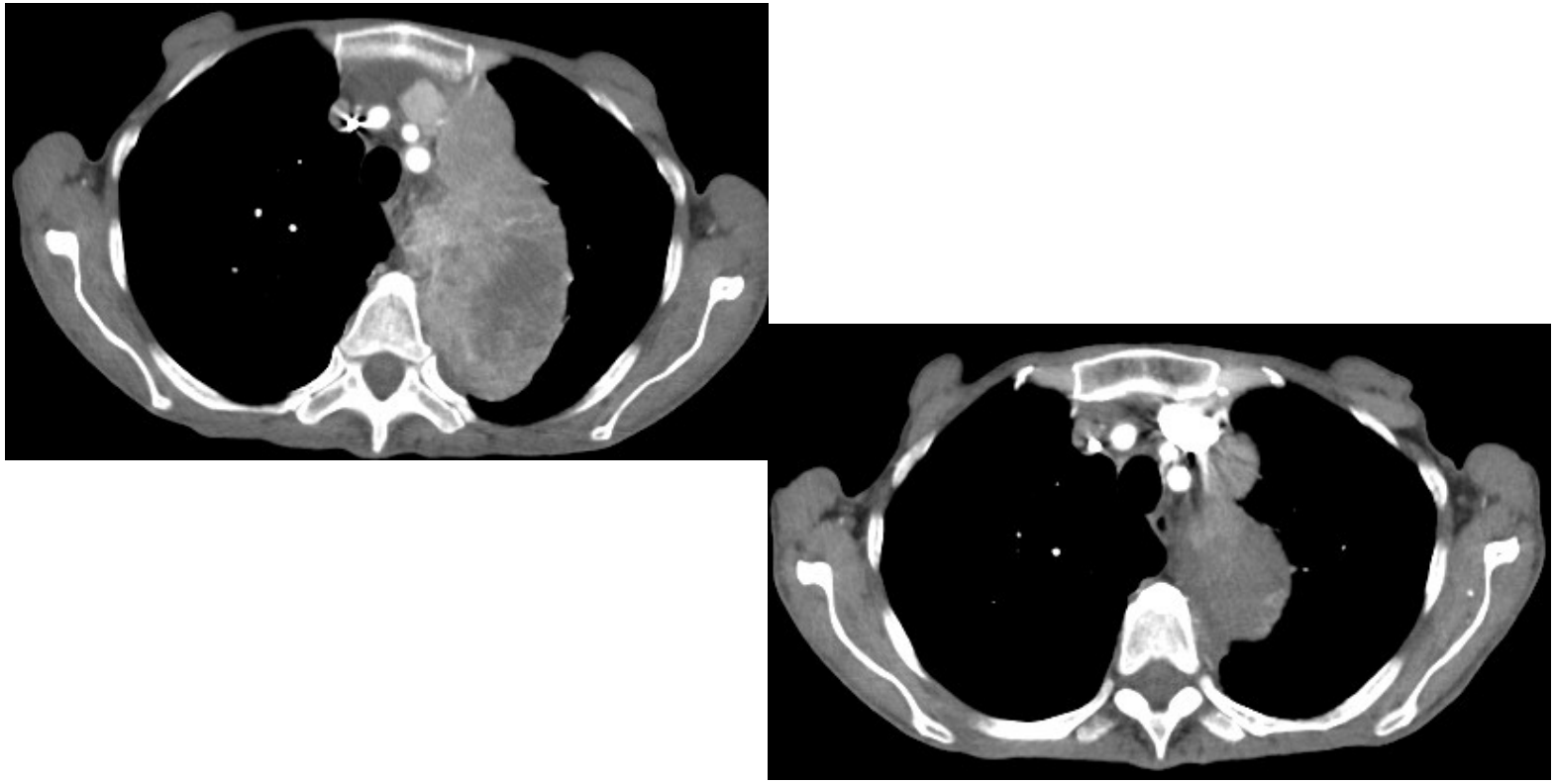


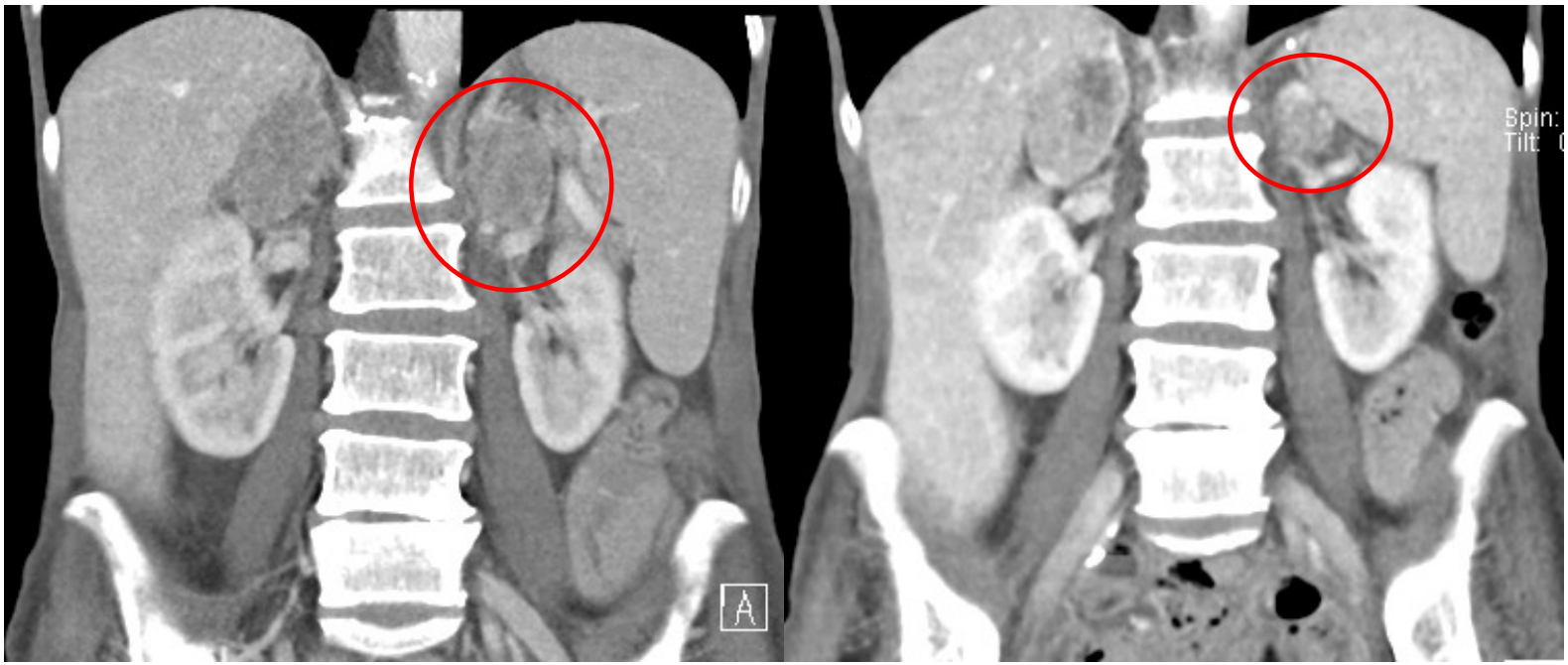


Therpaieeinleitung KRAS Inhibitor

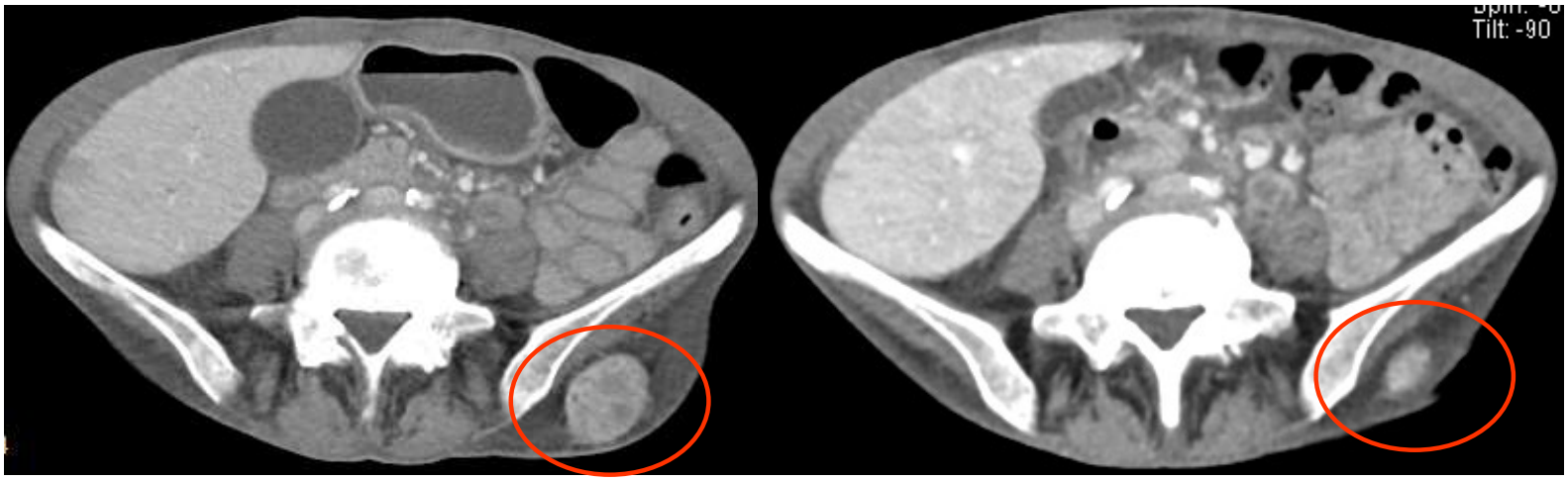


Gutes Therapieansprechen




A
Spin:
Tilt:

Rasches Ansprechen!



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