NSCLC stage IIIA role of radiotherapy

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Stage IIIA NSCLC

clinical or pathological?

T1a N2 M0
T1b N2 M0
T1c N2 M0
T2a N2 M0
T2b N2 M0
T3 N1 M0
T4 N0 M0
T4 N1 M0

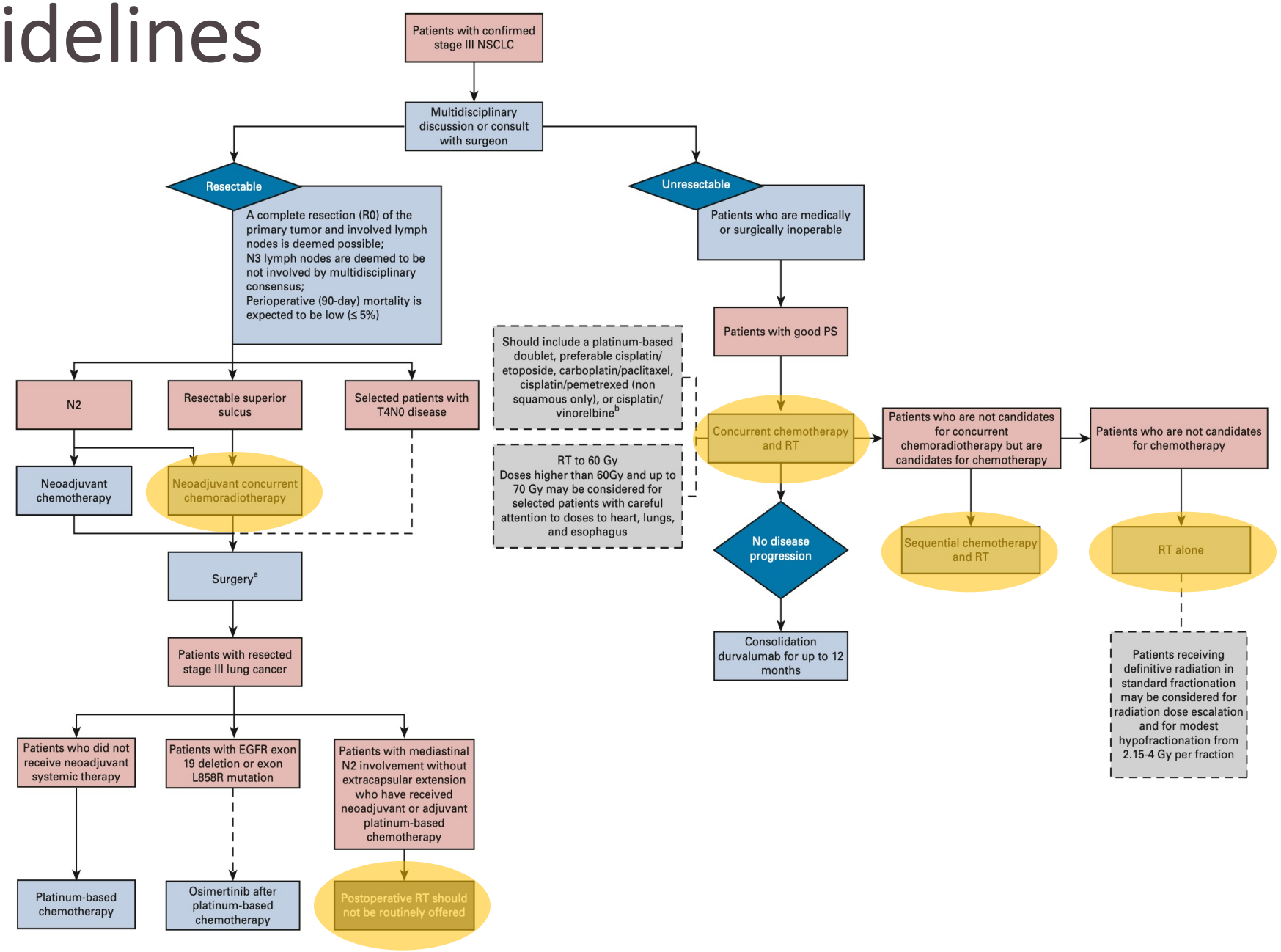
resectable?

chest wall?

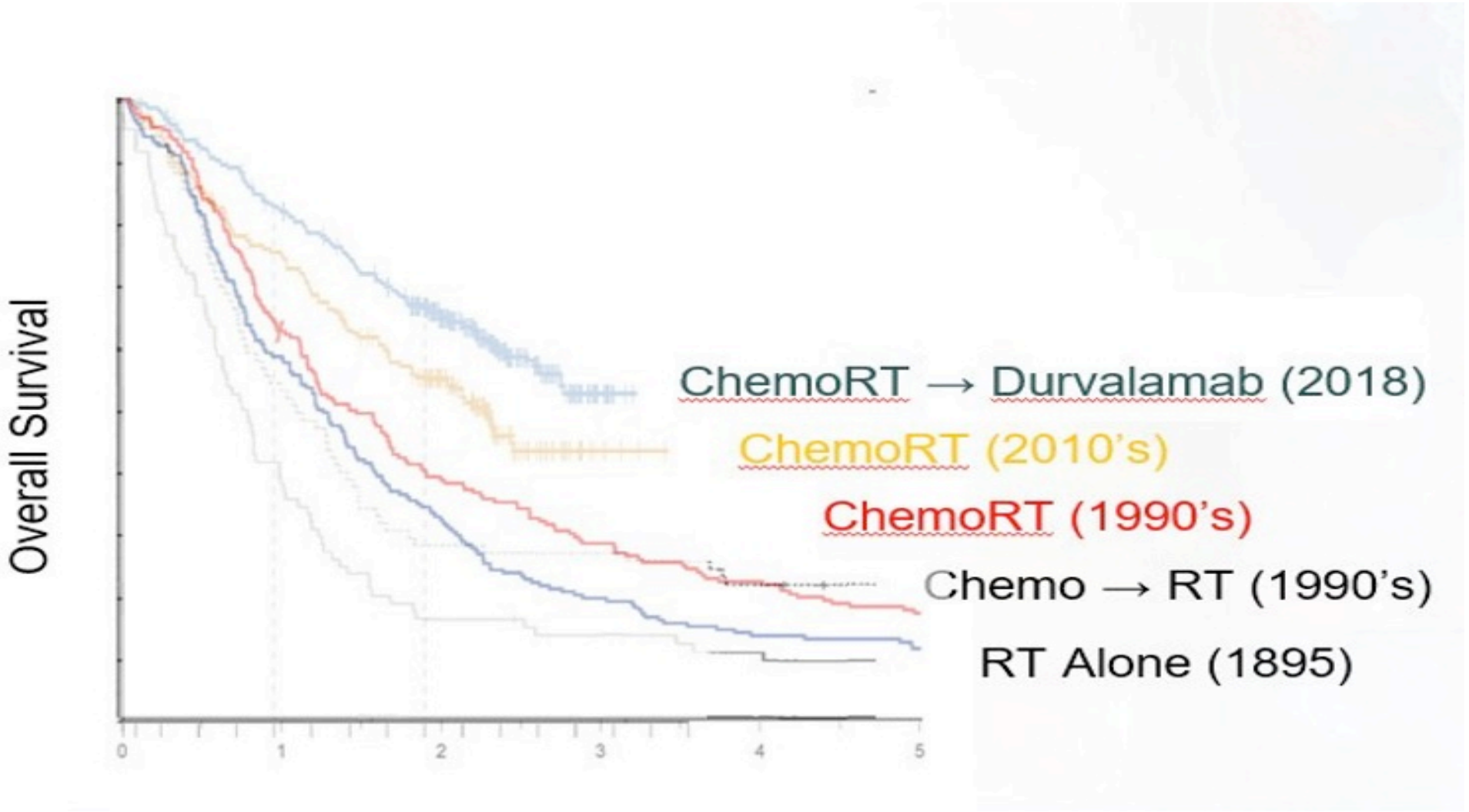
superior sulcus?

spine?

ASCO Guidelines



median survival time improvement for St III NSCLC

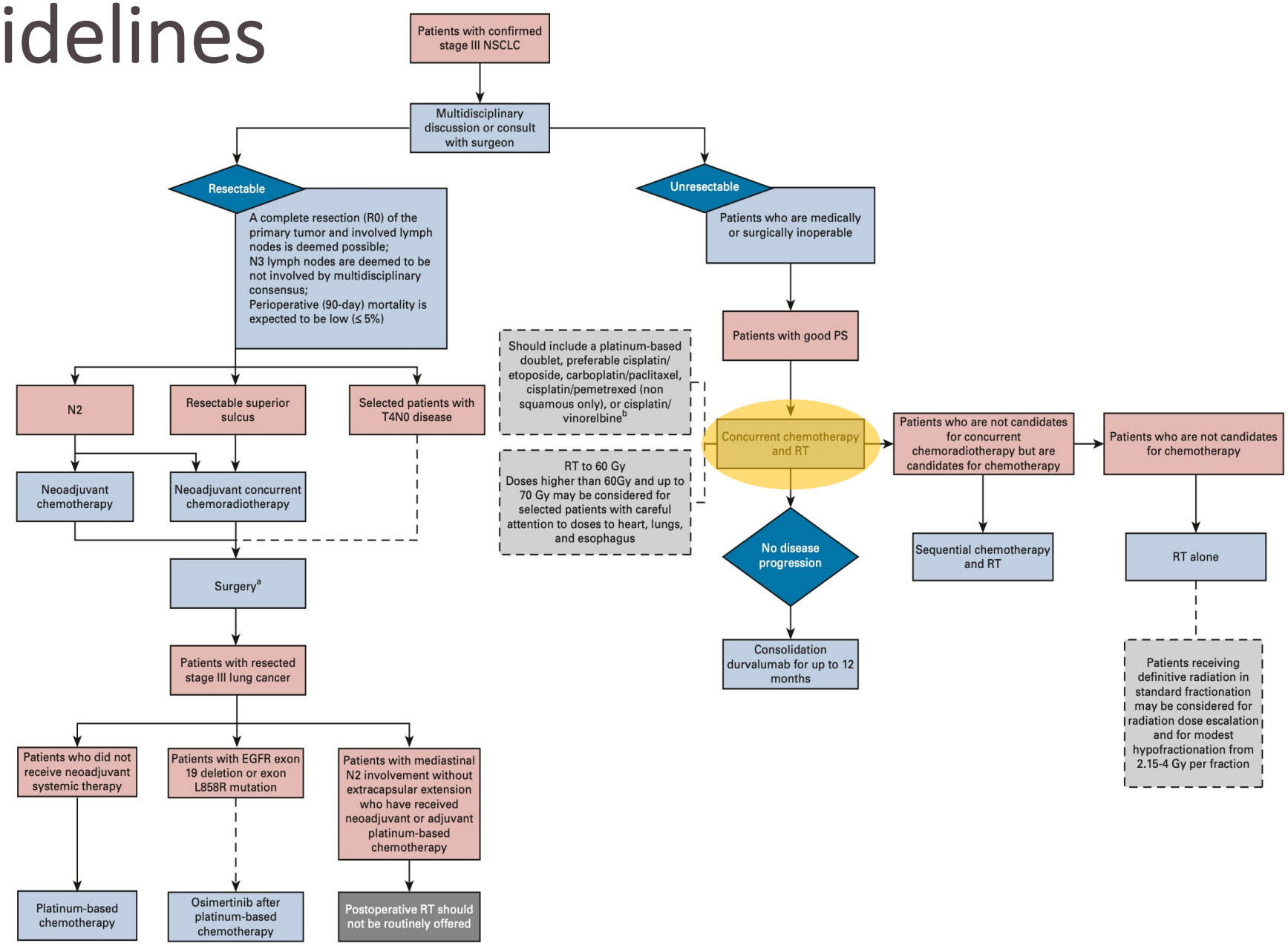


RT has improved as well

- target definition: locating tumor on **CT simulation** rather than landmarks
- **volumetric (3D)** rather than point (2D) dose prescription (conformal 3D; IMRT; VMAT; protons)
- use of **lower photon** energy (6-10 MV)
- **heterogeneity** correction: (lung vs. tumor density)
- accounting for **motion**: 4D CT simulation
- not missing the tumor during daily RT: **IGRT**
- understanding **normal tissue tolerance** (lung V20)
- **limiting breaks** during treatment course

definitive ChT/RT

ASCO Guidelines



Durvalumab after Chemoradiotherapy in Stage III Non–Small-Cell Lung Cancer

Table 3. Adverse Events of Any Cause.

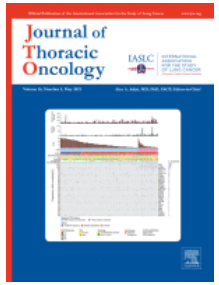
Event	Durvalumab (N = 475)		Placebo (N = 234)	
	Any Grade*	Grade 3 or 4	Any Grade*	Grade 3 or 4
	number of patients with event (percent)			
Any event	460 (96.8)	142 (29.9)	222 (94.9)	61 (26.1)
Cough	168 (35.4)	2 (0.4)	59 (25.2)	1 (0.4)
Pneumonitis or radiation pneumonitis†	161 (33.9)	16 (3.4)	58 (24.8)	6 (2.6)
Fatigue	113 (23.8)	1 (0.2)	48 (20.5)	3 (1.3)
Dyspnea	106 (22.3)	7 (1.5)	56 (23.9)	6 (2.6)
Diarrhe	87 (18.3)	3 (0.6)	44 (18.8)	3 (1.3)
Pyrexia				0
Decreas				2 (0.9)
Nausea				0
Pneum				9 (3.8)
Arthralgia	59 (12.4)	0	26 (11.1)	0
Pruritus	58 (12.2)	0	11 (4.7)	0
Rash	58 (12.2)	1 (0.2)	17 (7.3)	0
Upper respiratory tract infection	58 (12.2)	1 (0.2)	23 (9.8)	0
Constipation	56 (11.8)	1 (0.2)	20 (8.5)	0
Hypothyroidism	55 (11.6)	1 (0.2)	4 (1.7)	0
Headache	52 (10.9)	1 (0.2)	21 (9.0)	2 (0.9)
Asthenia	51 (10.7)	3 (0.6)	31 (13.2)	1 (0.4)
Back pain	50 (10.5)	1 (0.2)	27 (11.5)	1 (0.4)
Musculoskeletal pain	39 (8.2)	3 (0.6)	24 (10.3)	1 (0.4)
Anemia	36 (7.6)	14 (2.9)	25 (10.7)	8 (3.4)

CONCLUSIONS

Progression-free survival was significantly longer with durvalumab than with placebo. The secondary end points also favored durvalumab, and safety was similar between the groups. (Funded by AstraZeneca; PACIFIC ClinicalTrials.gov number, NCT02125461.)

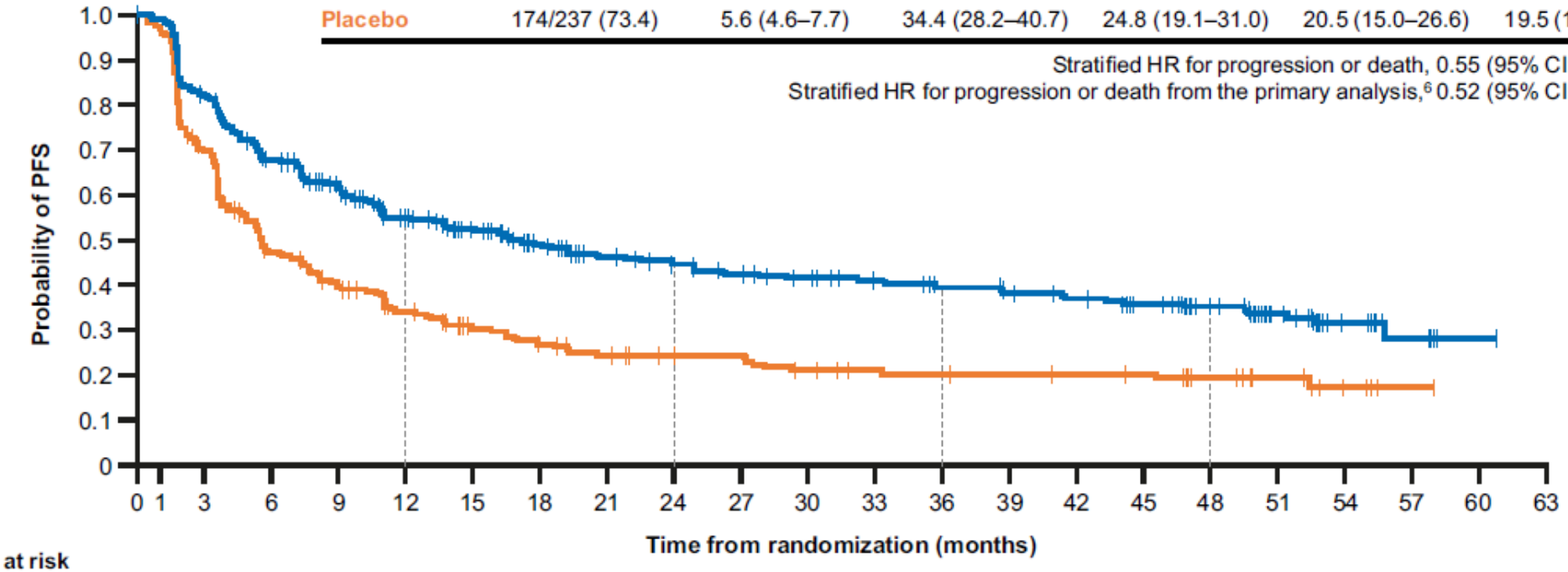
S.J. Antonia, N Engl J Med 2017

Four-Year Survival With Durvalumab After Chemoradiotherapy in Stage III NSCLC—an Update From the PACIFIC Trial



	No. of events/ total no. of patients (%)	Median PFS (95% CI), months	12-month PFS rate (95% CI) %	24-month PFS rate (95% CI) %	36-month PFS rate (95% CI) %	48-month PFS rate (95% CI) %
Durvalumab	266/476 (55.9)	17.2 (12.3–23.8)	55.3 (50.5–59.8)	44.8 (39.8–49.6)	39.8 (34.8–44.8)	35.3 (30.3–40.4)
Placebo	174/237 (73.4)	5.6 (4.6–7.7)	34.4 (28.2–40.7)	24.8 (19.1–31.0)	20.5 (15.0–26.6)	19.5 (14.1–25.7)

Stratified HR for progression or death, 0.55 (95% CI: 0.44–0.67)
Stratified HR for progression or death from the primary analysis,[6] 0.52 (95% CI: 0.42–0.65)



No. at risk																						
Durvalumab	476	377	301	266	213	189	165	146	136	127	119	110	103	97	92	80	59	37	18	8	1	0
Placebo	237	163	105	86	67	55	47	40	36	35	29	26	25	24	23	22	16	11	5	1	0	0

C. Faivre-Finn et al. *J Thor Oncol* 2021

preoperative ChT/RT