



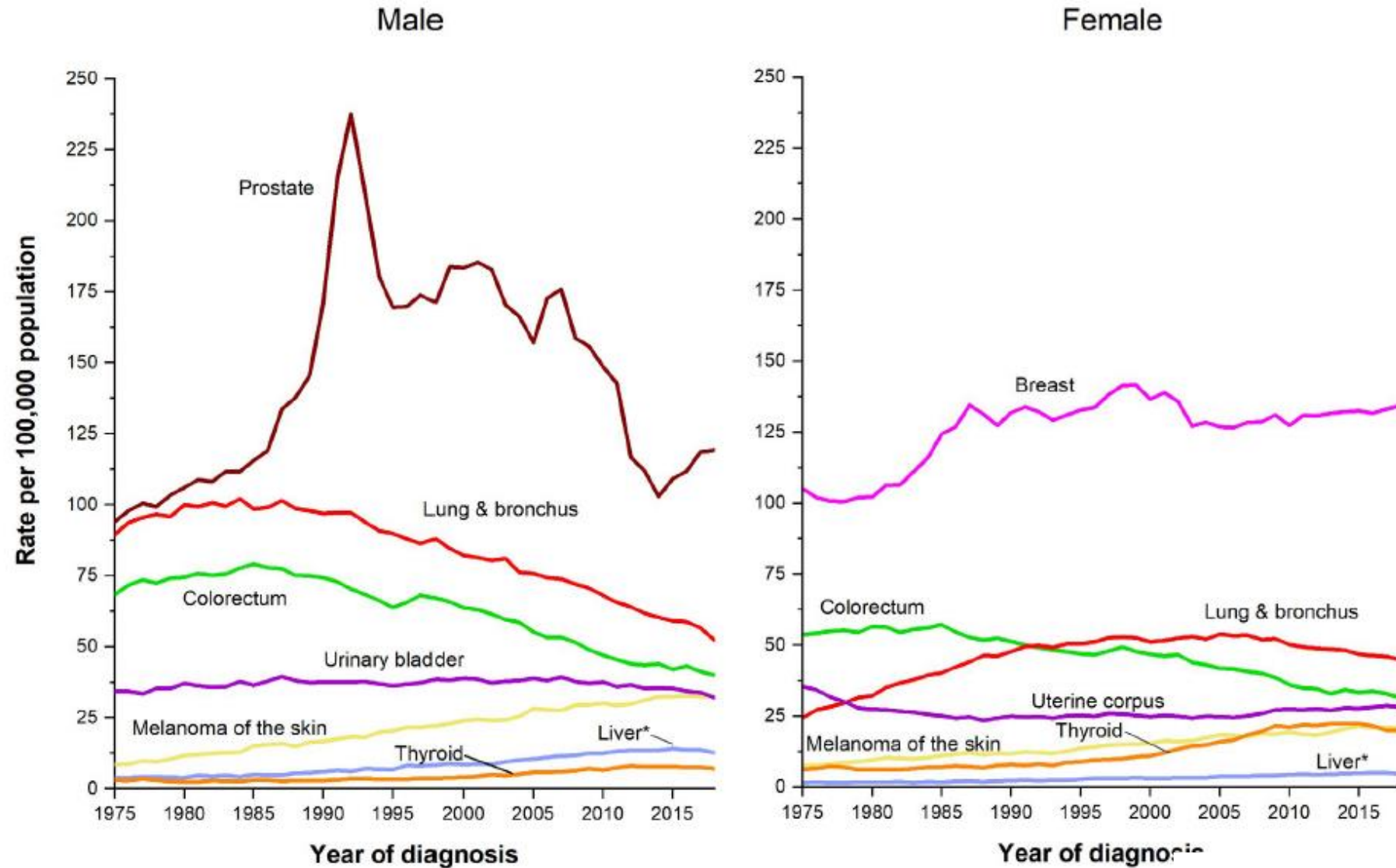
Patient atteint d'une tumeur solide : qui admettre en réanimation en 2022 ?

Virginie Lemiale

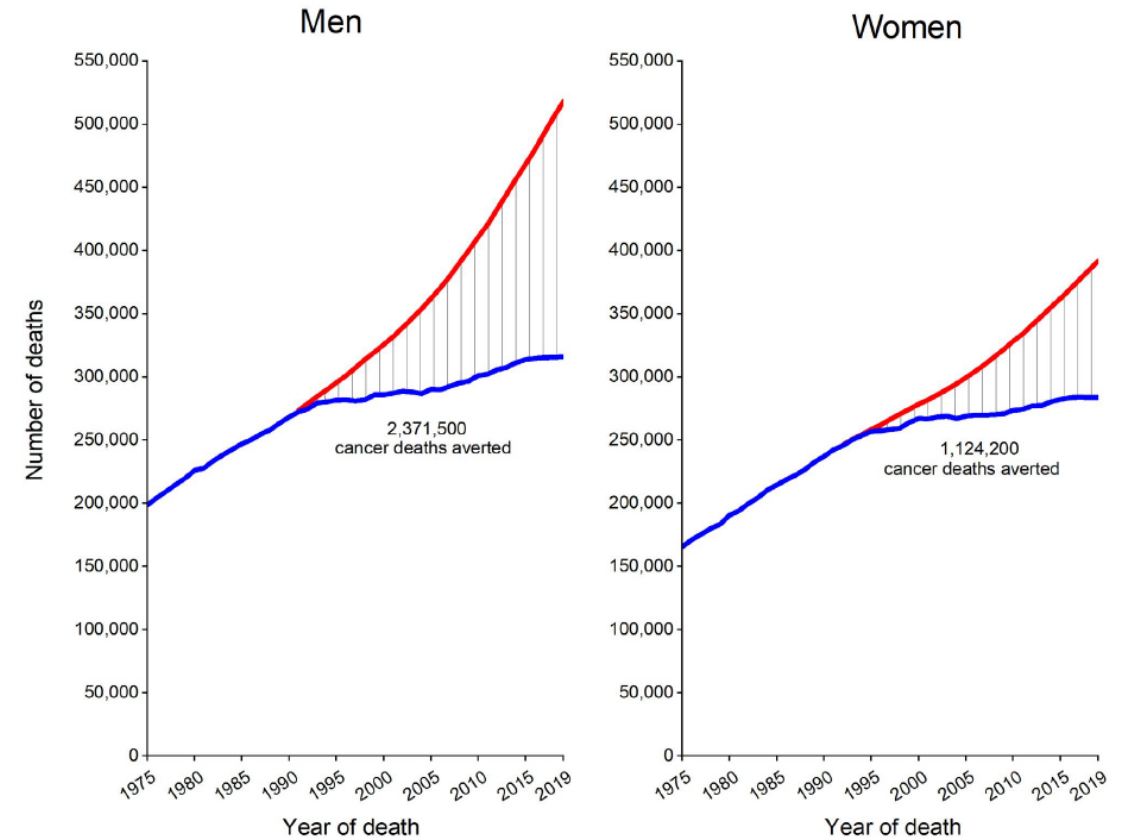
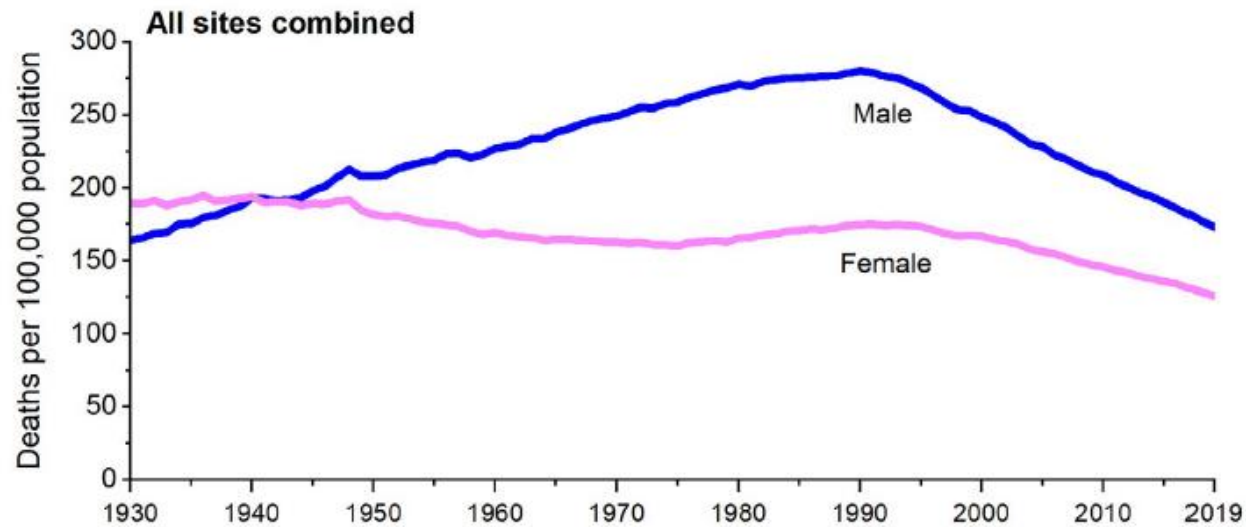
APHP Saint Louis

GrrrOH

Incidence du cancer

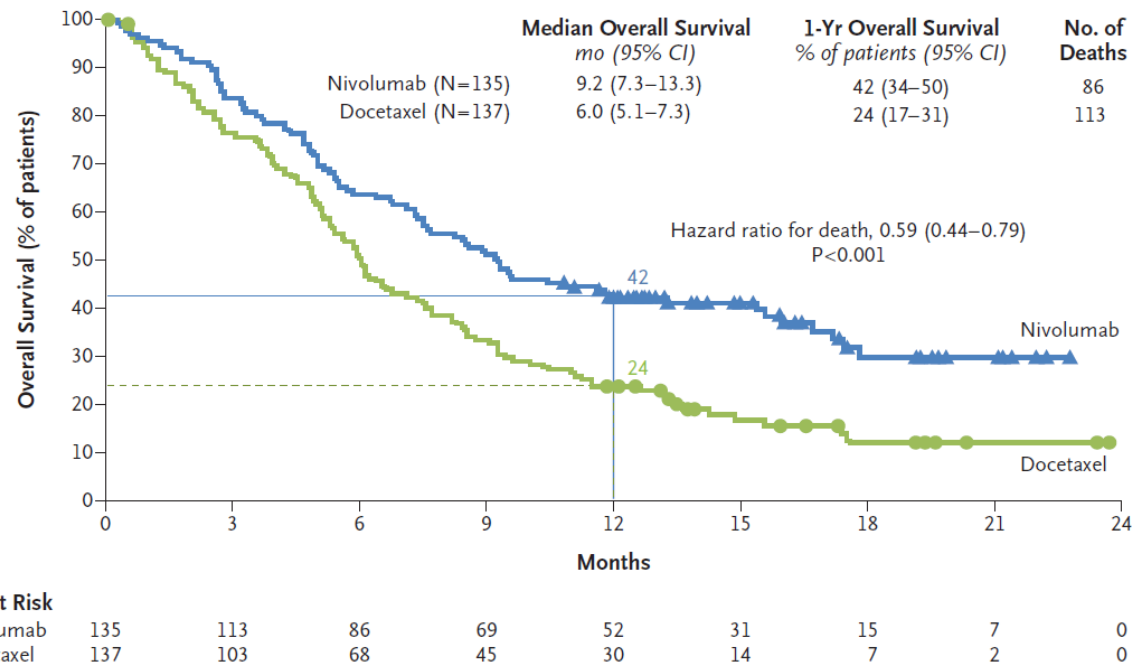


Mortalité des patients avec un cancer



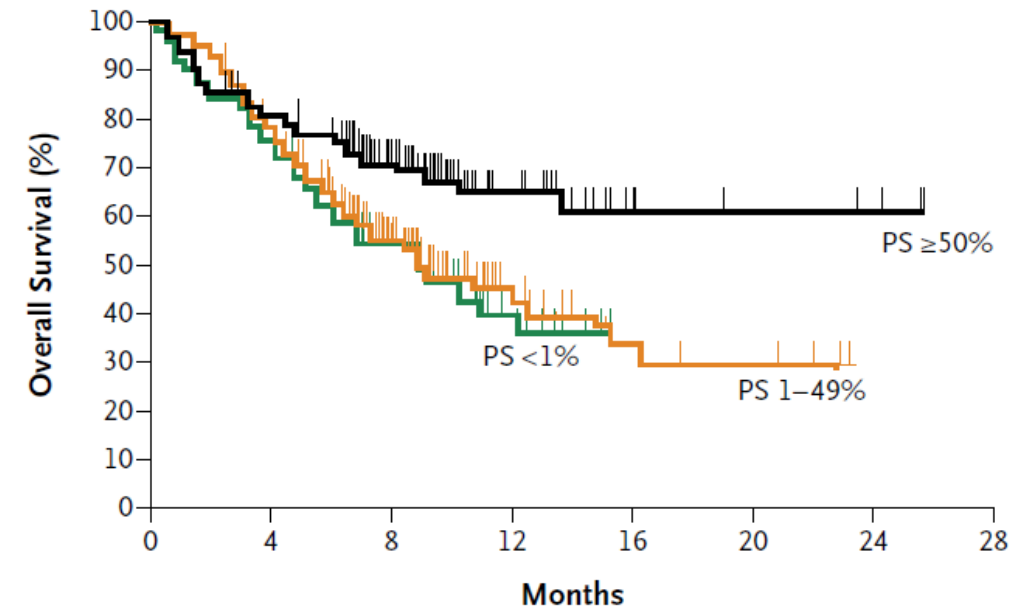
Des progrès majeurs en terme de survie

Cancer pulmonaire non à petites cellules non opérable



N Engl J Med 2015;373:123-35.

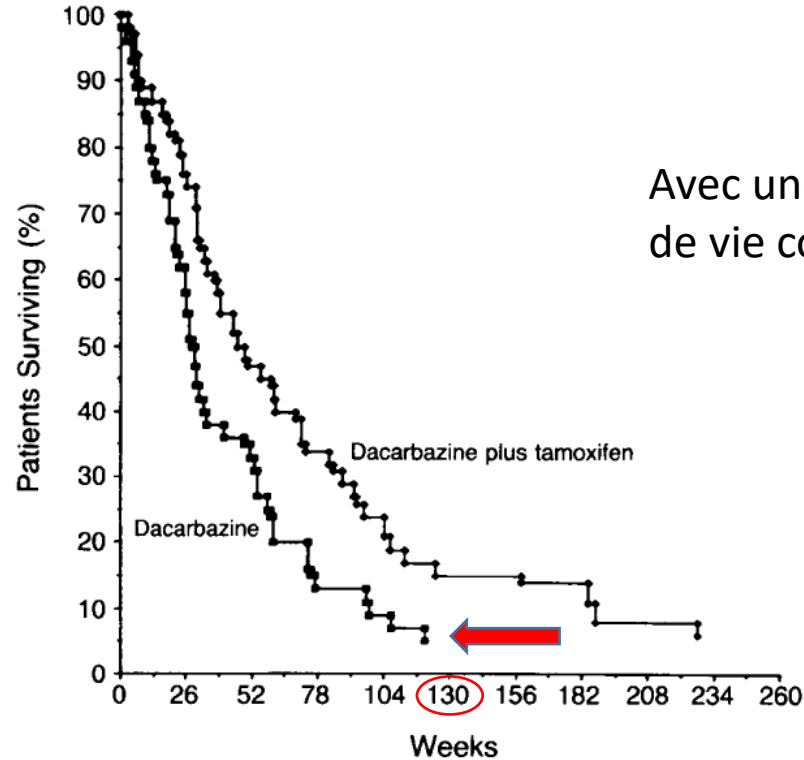
A All Patients



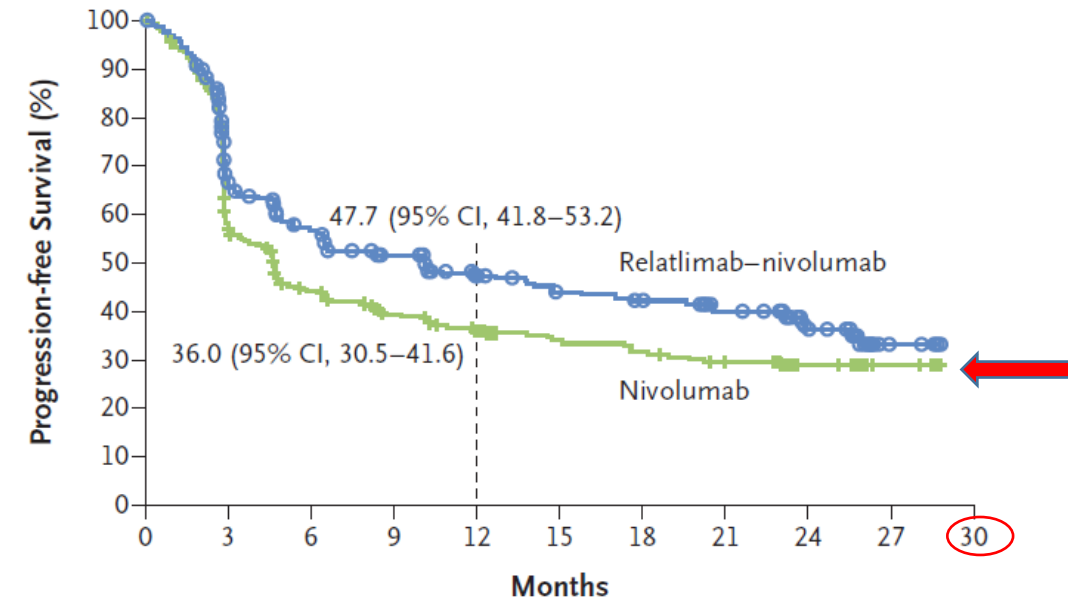
N ENGL J MED 372;21 NEJM.ORG MAY 21, 2015

Des progrès majeurs en terme de survie

Mélanomes métastatiques



Avec une qualité
de vie correcte



	No. of Patients	Progression-free Survival (95% CI) mo
Relatlimab–Nivolumab	355	10.12 (6.37–15.74)
Nivolumab	359	4.63 (3.38–5.62)

Hazard ratio for progression or death, 0.75 (95% CI, 0.62–0.92)
P=0.006

Admission en réanimation

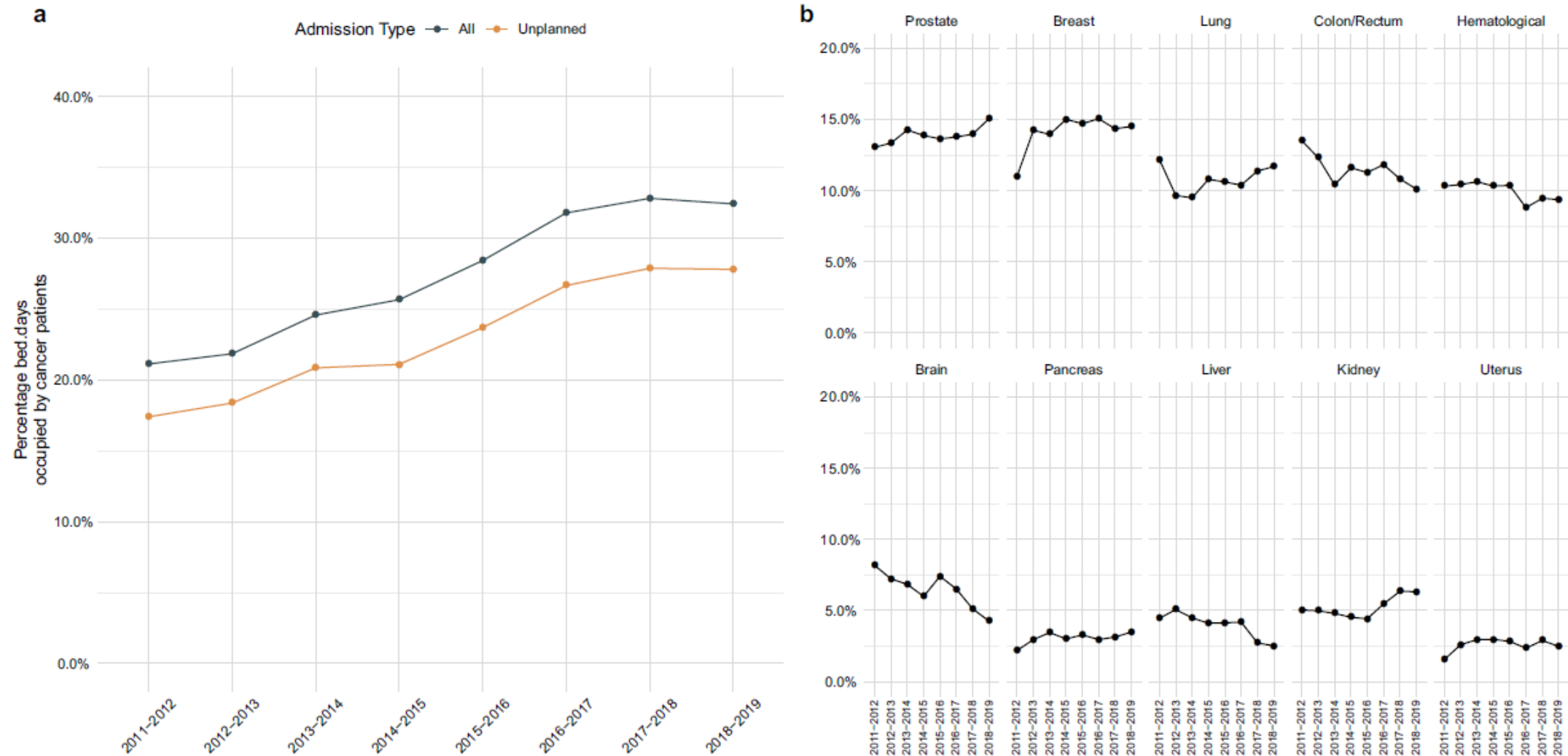
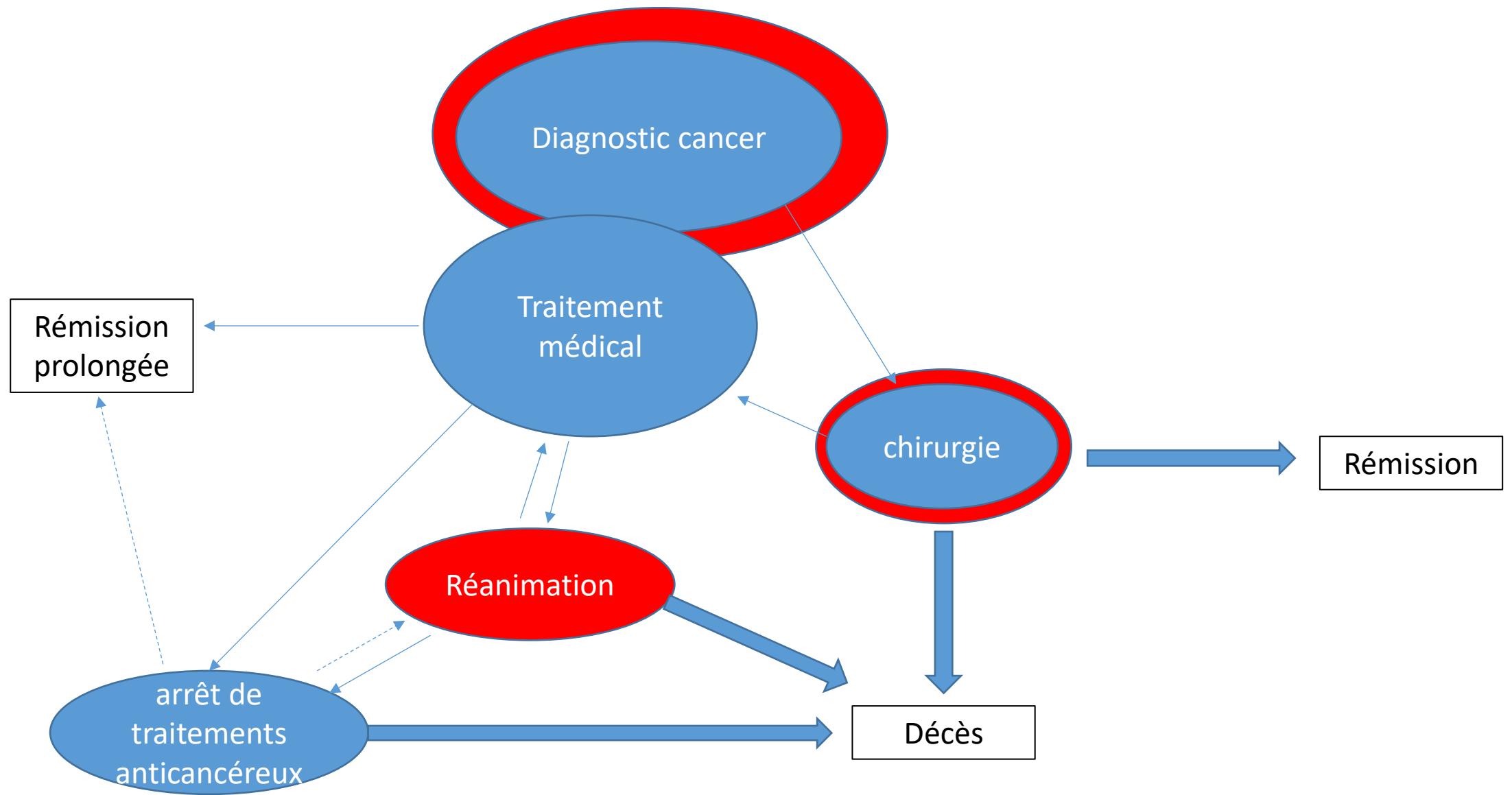


Fig. 1 **a** Percentage of ICU bed-days occupied by cancer patients over time; **b** Percentage of admissions according to relevant primary tumor sites



Pourquoi les patients viennent-ils en réanimation ?

Décompensation
d'une comorbidité

Diagnostic du cancer

Complication
intercurrente

Maladie veineuse
thrombo-embolique



Complication liée au
cancer

ARF

Complication d'une
métastase

Post opératoire

Complication du
traitement

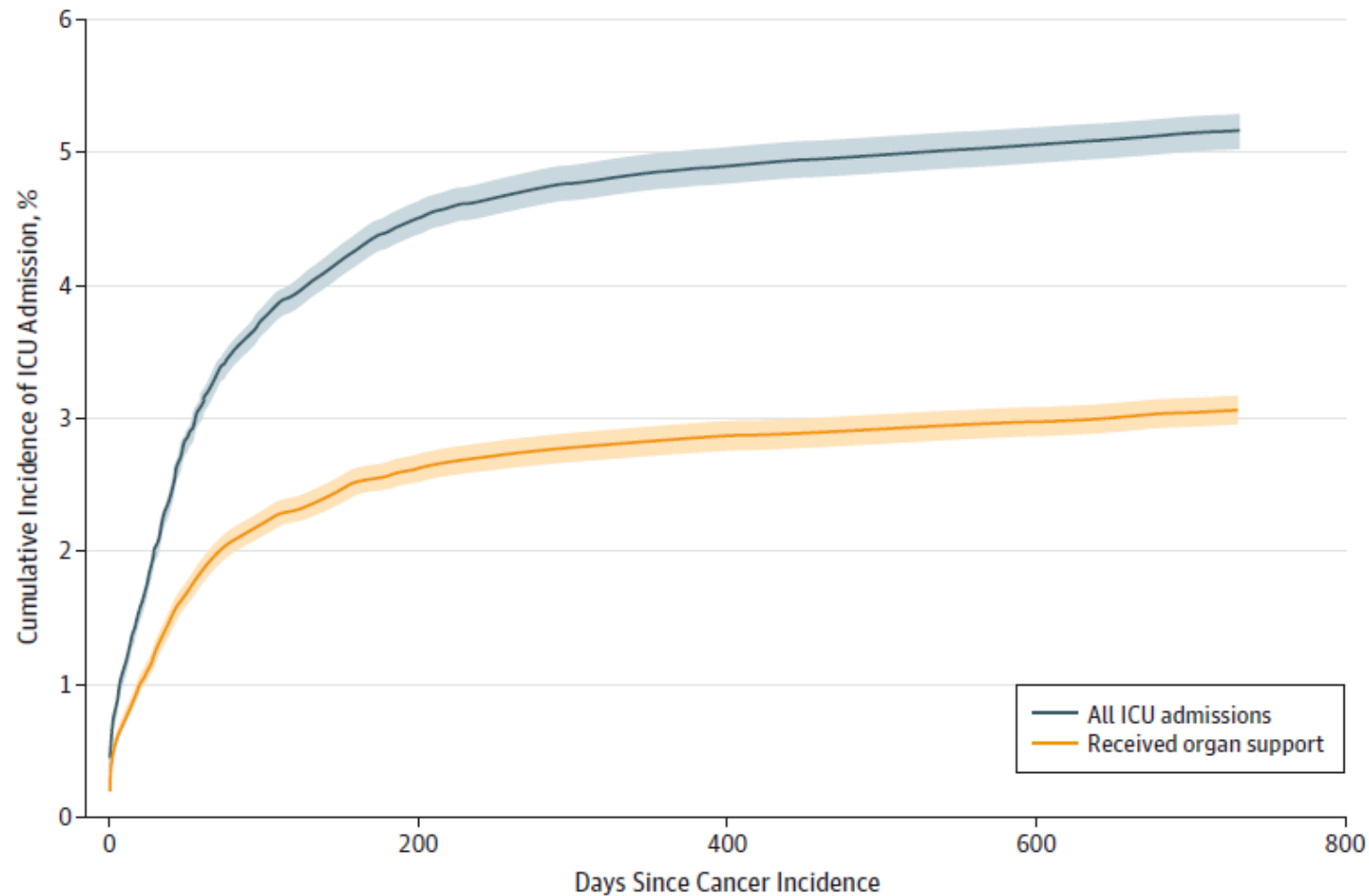
Sepsis

toxicité

ARF

A Quel moment viennent-ils?

Figure. Cumulative Incidence of Admission to Intensive Care Units (ICUs) by Time Since Cancer Incidence Date



Qui sont les patients avec un cancer admis en réanimation ?

Characteristics	2005-2015	Total (n = 622)
Age y (IC)		62 (53-70)
Sex (Male, %)		342 (55)
Performance status		1 (1-2)
Type of cancer: (n, %)		
ACUP		28(4.5)
Breast		122 (19.6)
Cerebral		2 (0.3)
Gastrointestinal		126 (20.2)
Gynaecologic		36 (5.8)
HNSCC		37 (5.9)
Lung		133 (21.4)
Melanoma		21 (3.3)
Sarcoma		3 (0.5)
Thyroid		12 (1.9)
Urologic		102 (16.4)
Stage: (n, %)		
Localized cancer		193 (31.6)
Locally advanced cancer		102 (16.7)
Metastatic cancer		316 (51.7)
NA		
Time from cancer diagnosis (day)		228 (76-938)
NA		
Inaugural diagnosed cancer in ICU (n, %)		89 (14.3)
Treatment already received for cancer: (n, %)		
Surgery		285 (45.8)
NA		
Chemotherapy		384 (61.7)
NA		
Radiotherapy		190 (30.5)
NA		
Delay between hospital and ICU admission (day)		1 (0-5)
Neutropenia at ICU admission (n, %)		79 (12.7)

2016-2019

271 patients avec sepsis et tumeur solide

62 (19-94) ans

Type de cancer

poumon 19,2%

sein 7,7%

Melanome 4,4%

Metastatique 84%

Neutropénique 18,5%

PS3-4 49%

SOFA 9(4-19)

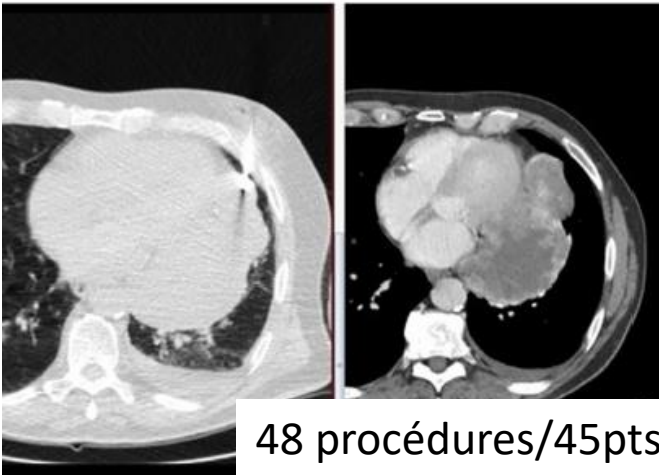
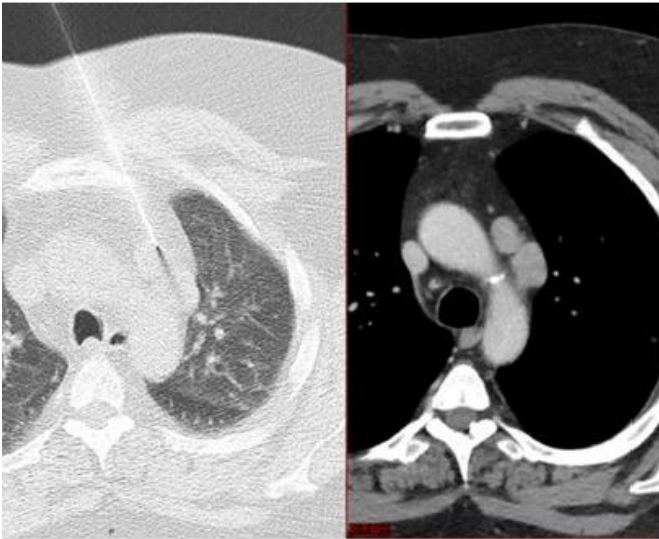
Qui sont les patients avec un cancer admis en réanimation ?

Variables	All patients (<i>n</i> = 449)
Characteristics at ICU admission	
Age (years)	63.8 ± 11.7
Gender	
Female	148 (33%)
Male	301 (67%)
Type of admission	
Surgical	182 (41%)
Medical	267 (59%)
Hospital LOS before ICU admission (days)	1 (0–4)
SAPS II (points)	46.1 ± 19.1
SOFA score—First ICU day (points)	5 (3–8)
Charlson Comorbidity Index (points) ^d	0 (0–1)
0–2	414 (92%)
>2	35 (8%)
Performance status	
0–2	379 (84%)
3–4	70 (16%)
Organ support during ICU stay	
Ventilatory support on day 1	239 (53%)
Vasopressors on day 1	128 (29%)
Dialysis on day 1	20 (4%)

Variables	All patients (<i>n</i> = 449)
Type of lung cancer	
NSCLC	394 (88%)
Adenocarcinoma	258 (57%)
Squamous cell	120 (27%)
Other	16 (4%)
SCLC	55 (12%)
Cancer stage	
NSCLC	
I	91 (20%)
II	58 (13%)
III	94 (21%)
IV	151 (34%)
SCLC	
Limited	22 (5%)
Extensive	33 (7%)
Metastatic disease	
No	265 (59%)
Yes	184 (41%)
Cancer status	
Controlled/remission	32 (7%)
Newly diagnosed	318 (71%)
Recurrence/progression	99 (22%)

Permettre le diagnostic

Encadrer une fibroscopie/biopsie, une biopsie sous TDM



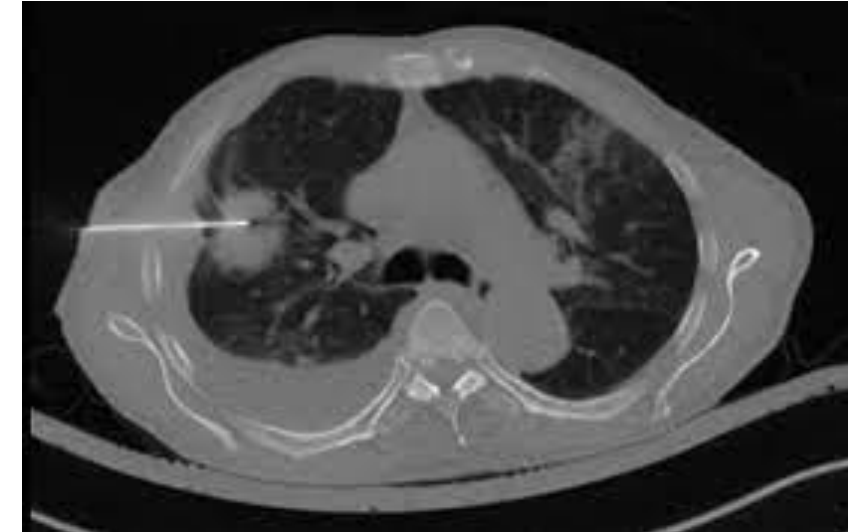
48 procédures/45pts
12 pneumothorax (4 drainages)

Risque de détresse respiratoire



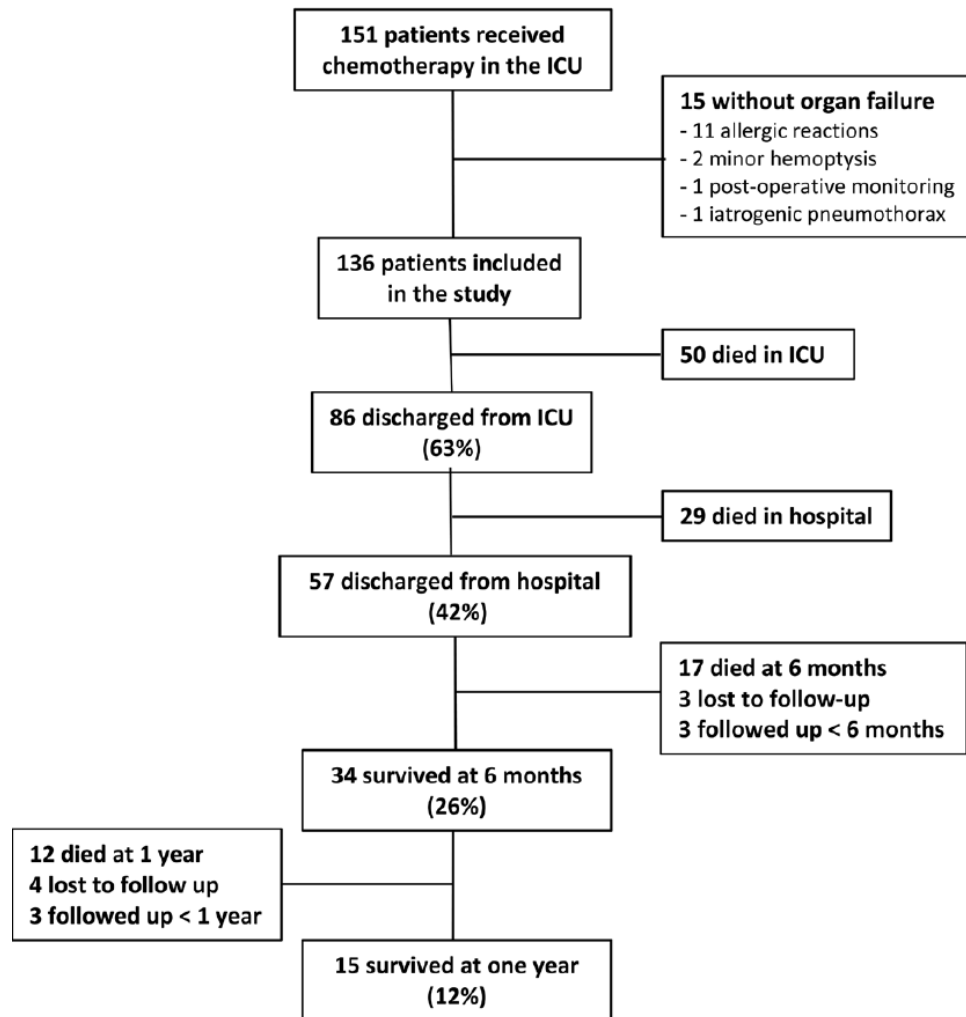
N. Clapp et al. Respiratory Medicine Case Reports 39 (2022) 101718

Risque d'hémoptysie



Bénéfice probable à évaluer : diagnostic et traitement rapide

Réaliser une chimiothérapie en urgence



Type of cancer, *n* (%)

SCLC	57 (42)
Non-SCLC	33 (24)
Non-lung cancer	46 (34)

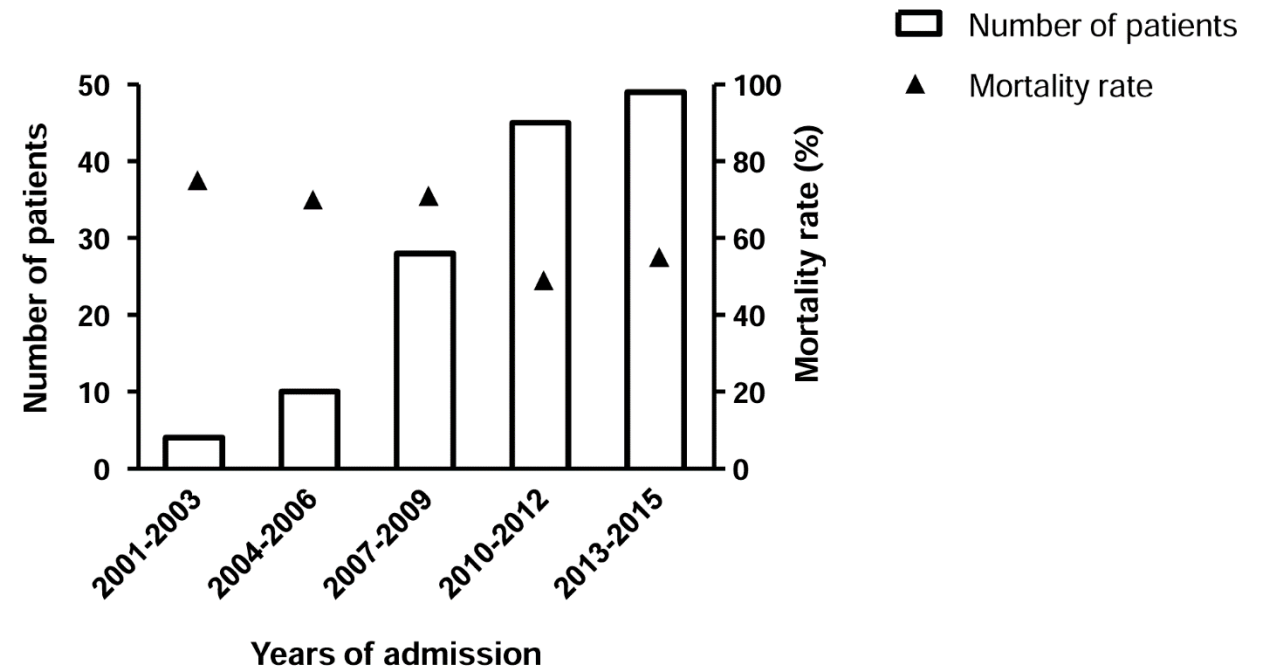
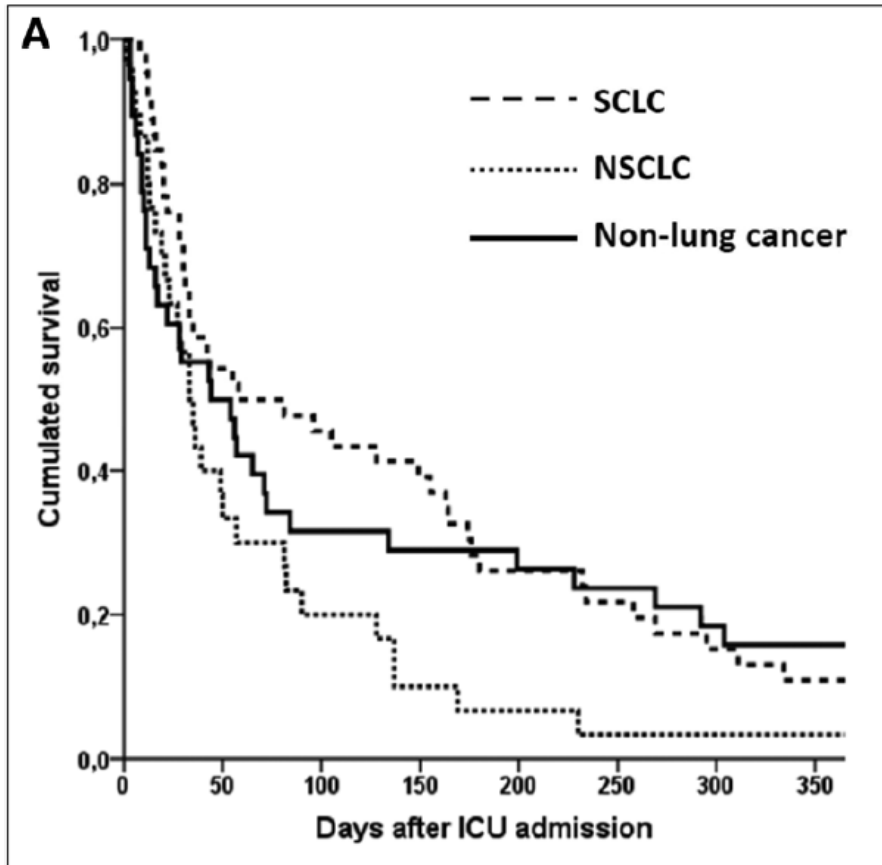
Mechanisms of organ failure, *n* (%)

Compression	78 (57.4)
Infiltration	47 (34.6)
Others ^b	11 (8.1)

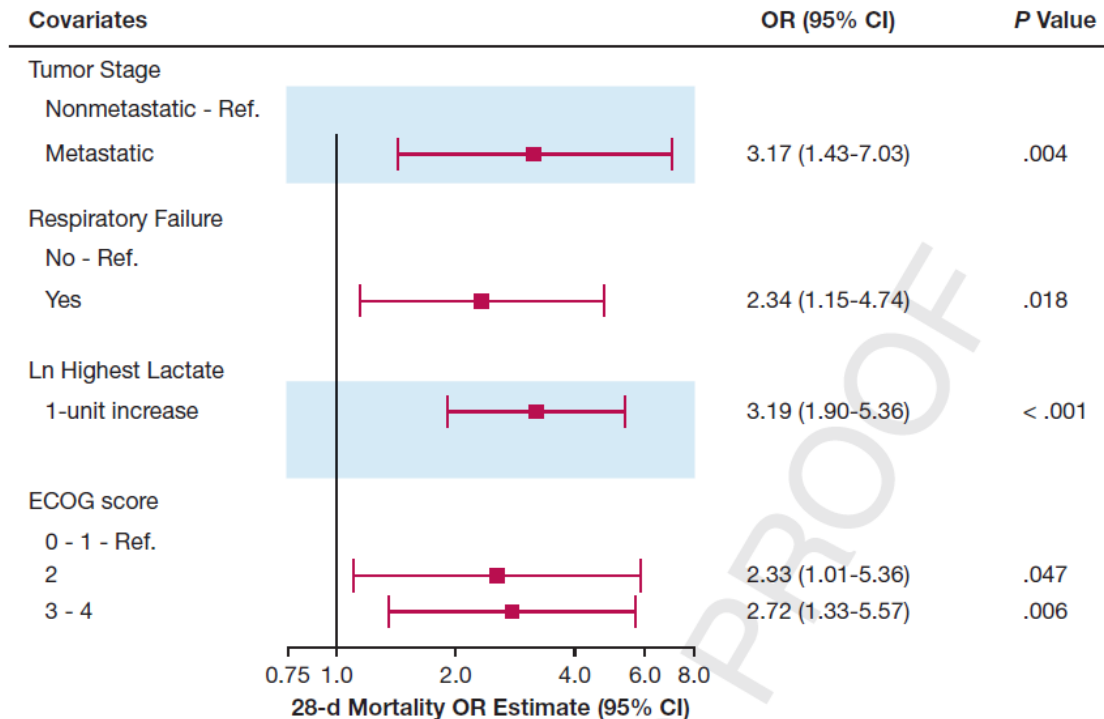
Adjuvant treatments, *n* (%)

Instrumental	34 (25)
Draining	22 (16.2)
Prosthesis insertion	9 (6.6)
Arterial embolization	3 (2.2)
Surgery	12 (8.8)

Réaliser une chimiothérapie en urgence



Sepsis et choc septique

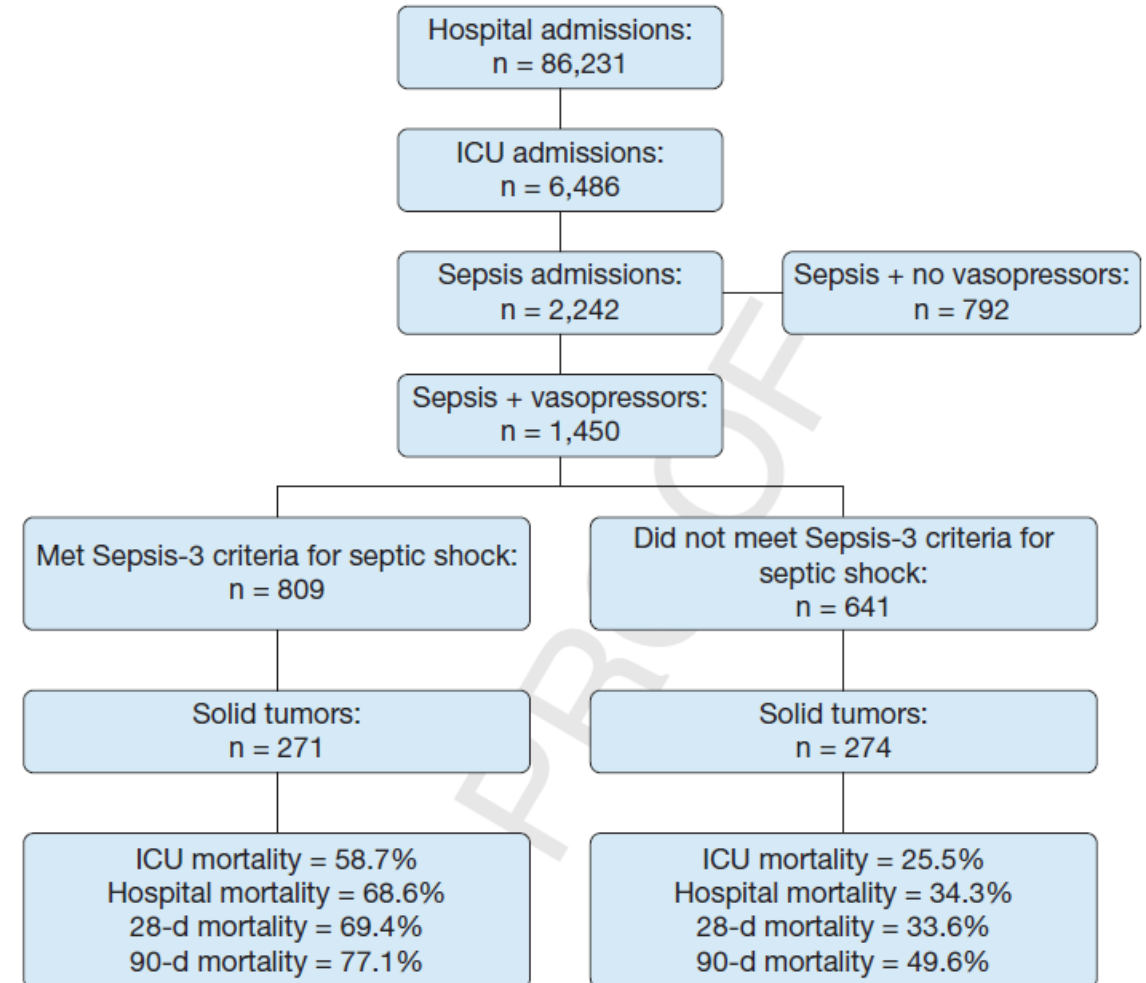


271 patients

KBP: 19%

Métastatique: 84%

PS: 3-4 49%



Détresse respiratoire aigue

Patients admitted to ICU for ARF N=529					
	Prostatic N=30	Breast N=52	Lung N=103	Digestive N=48	Other N=297
ARF etiology					
Pulmonary infection	15 (50)	17 (33)	43 (42)	21 (44)	124 (42)
Extra-pulmonary ARDS	4 (13)	4 (8)	5 (5)	11 (23)	39 (13)
Fungal infection	3 (10)	5 (10)	7 (7)	2 (4)	6 (2)
Cancer related ARF or toxicity	3 (10)	9 (17)	20 (20)	4 (8)	47 (16)
Other reason	Epanchement pleural, EP				
Unknown reason		11 (21)	18 (18)	4 (8)	42 (14)
		6 (11)	10 (10)	6 (12)	39 (13)
Mortality rate	15 (50)	23 (44)	58 (59)	20 (36)	116 (39)

FDR de mortalité : ATCD pulmonaire, cancer pulmoanire,SOFA score, IRA sur autre cause

Mortalité en réanimation

État général, type de cancer et extension, sévérité de la maladie aiguë

1248 patients en réanimation
Mortalité en réanimation 41%

Variable	Odds ratio	95% CI	P value
Systemic extension of the disease	2.54	1.87–3.45	<0.001
Underlying tumor			
Lung cancers	Ref.	–	–
Colonic cancer	0.29	0.17–0.48	<0.001
Breast cancer	0.25	0.14–0.43	<0.001
Head and neck	0.52	0.29–0.93	0.03
Other	0.52	0.33–0.82	0.004
Renal replacement therapy during ICU	1.54	0.99–2.38	0.05
Vasopressors	2.35	1.66–3.29	<0.0001
Mechanical ventilation	2.54	1.80–3.59	<0.0001

622 patients
Mortalité en réanimation 22%

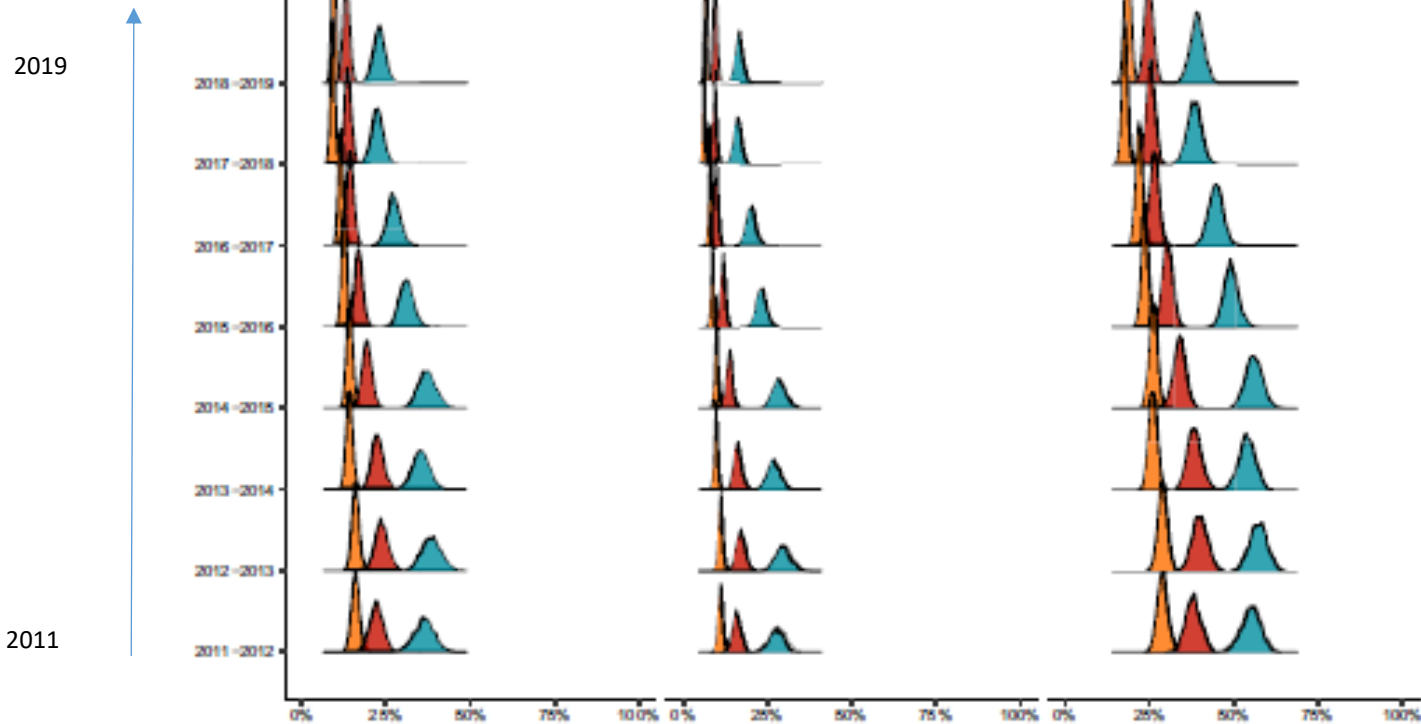
Characteristics	HR (IC 95%)	p
PS ≥2	1.47 (1.04-2.08)	0.031
Stage		
Localized	1	
Locally advanced	1.41 (0.77-2.57)	0.27
Metastatic	2.11 (1.31-3.40)	0.002
ICU admission after 2010	0.70 (0.50-0.98)	0.037
Vasopressor	2.37 (1.48-3.78)	0.0003
Invasive mechanical ventilation	4.53 (2.87-7.13)	<0.0001
Decision to withhold/withdraw life sustaining therapies during ICU stay	3.32 (2.24-4.90)	<0.0001

Table 2S: Factors associated with 30-day mortality (multivariate analysis)

Amélioration de la survie hospitalière

	2011–2012	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017	2017–2018	2018–2019	P value
Number of patients	1726	2227	2834	3354	4225	5125	6109	6496	0.069
Cancer type [n (%)]									<0.001
Hematological malignancies	178 (10.3)	232 (10.4)	301 (10.6)	346 (10.3)	438 (10.4)	451 (8.8)	578 (9.5)	608 (9.4)	
Solid, locoregional	1029 (59.6)	1316 (59.1)	1621 (57.2)	2103 (62.7)	2673 (63.3)	3517 (68.6)	4078 (66.8)	4671 (71.9)	
Solid, metastatic	519 (30.1)	679 (30.5)	912 (32.2)	905 (27)	1114 (26.4)	1157 (22.6)	1453 (23.8)	1217 (18.7)	
Recent chemotherapy [n (%)]									<0.001
ICU mortality	324 (18.8)	407 (18.3)	483 (17)	556 (16.6)	600 (14.2)	676 (13.2)	706 (11.6)	713 (11)	<0.001
Hospital outcomes									
Hospital mortality	569 (33)	720 (32.3)	868 (30.6)	978 (29.2)	1092 (25.8)	1135 (22.1)	1190 (19.5)	1151 (17.7)	<0.001

a No support



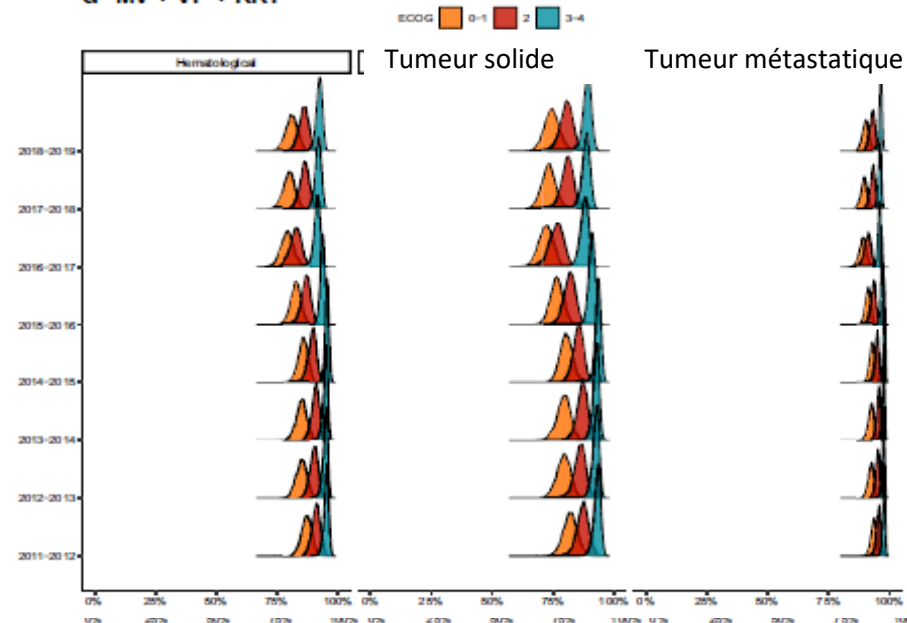
Pas d'amélioration:

- Support d'organe
- métastase
- PS>2
- Tumeur solide pulmonaire

Amélioration de la mortalité :

- En absence de support d'organe
- Y compris si metastase
- PS<2
- Tumeur solide non pulmonaire

d MV + VP + RRT

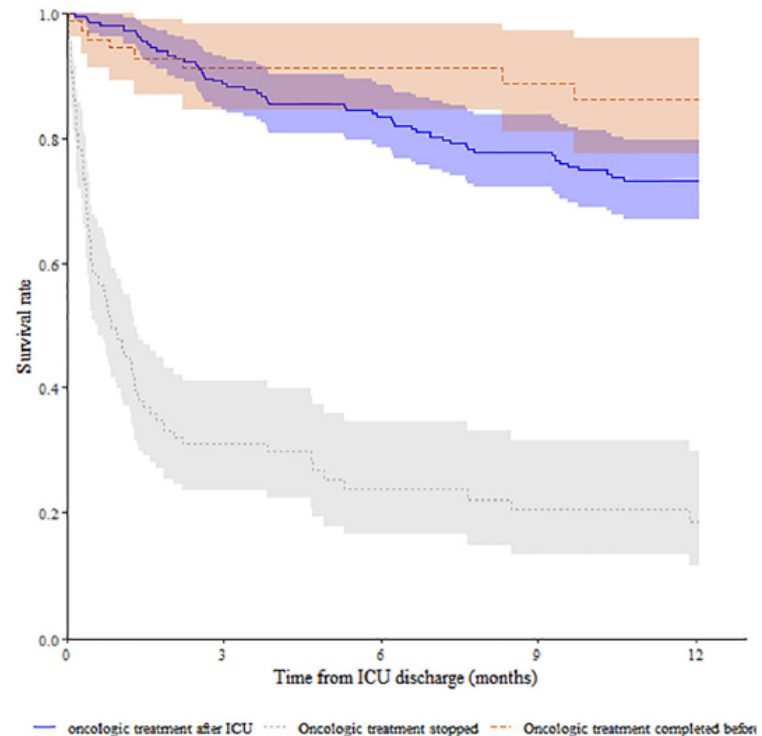


Possibilité de traitement après la réanimation

Discussion quotidienne avec l'oncologue

622 patients avant l'ère des thérapies ciblées et immunothérapie

Mortalité en réanimation 22%

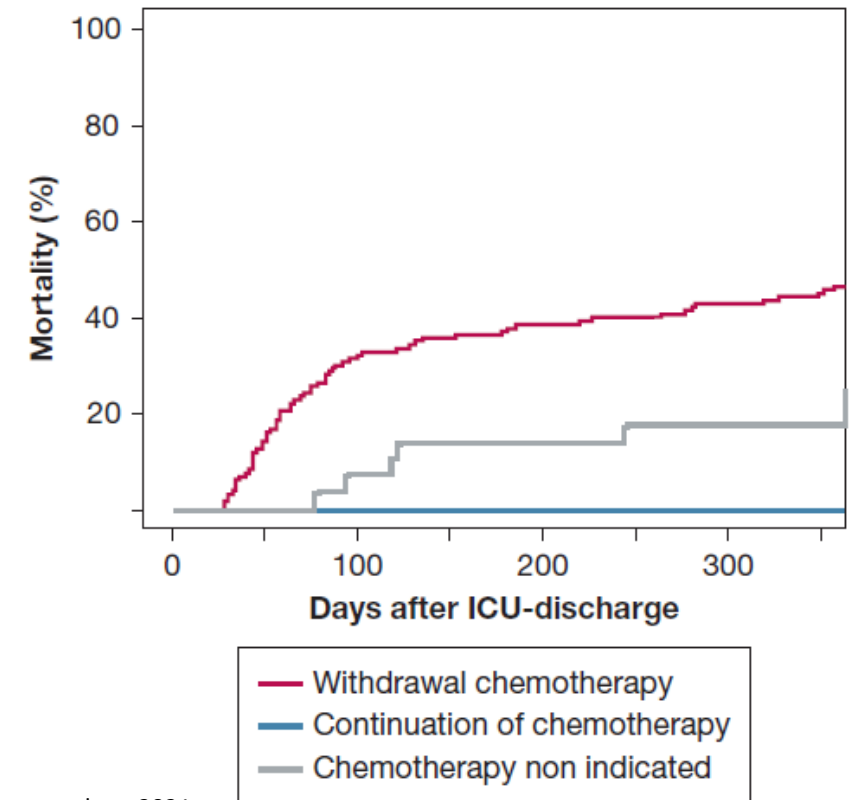


E. Borcoman et al. / Journal of Critical Care 57 (2020) 36–41 37

379 patients avec un KBP 2007-2018

Pas de post opératoire

Mortalité en réanimation 32%



Vigneron chest 2021

Pronostic de la réanimation au-delà de la première ligne de traitement

- Peu de données
- Données modifiées par les nouveaux traitements?

	Rémission	Diagnostic <1 mois	>1 ligne
Soares (ann Oncol 2014) (mortalité 6 mois)	34%	49,7%	77,7%
Auclin (AIC 2017)		0.88 (0.73–1.07)	
Vigneron AIC 2021			1.62 (1.28–2.05)
Borcoman (JCC 2020)	0,75 (0,32-1,72)	2.02 (1.28-3.2)	
Hong (frontier medicine 2022)			1.1(1.1-1.2)

Décisions difficiles

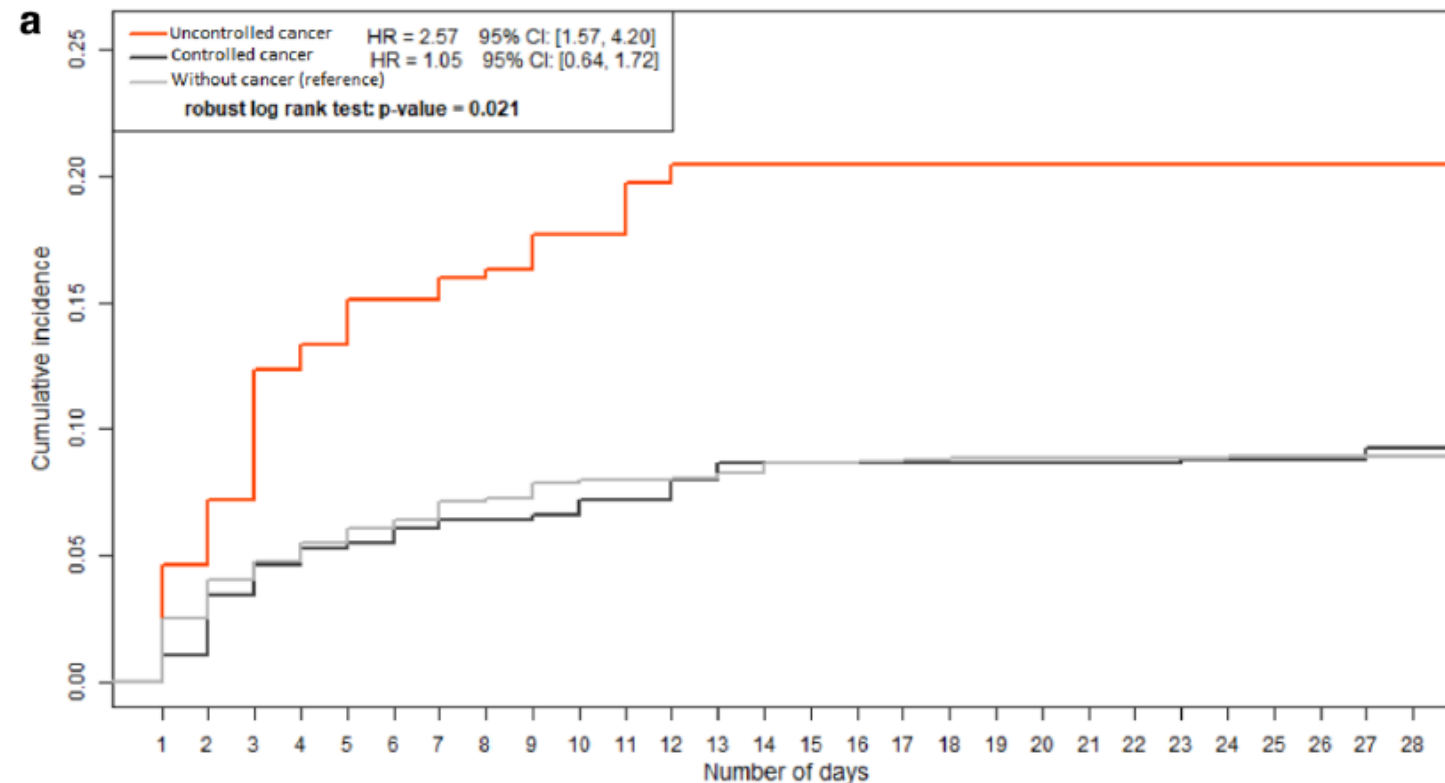
Perception des soignants

1641 patients

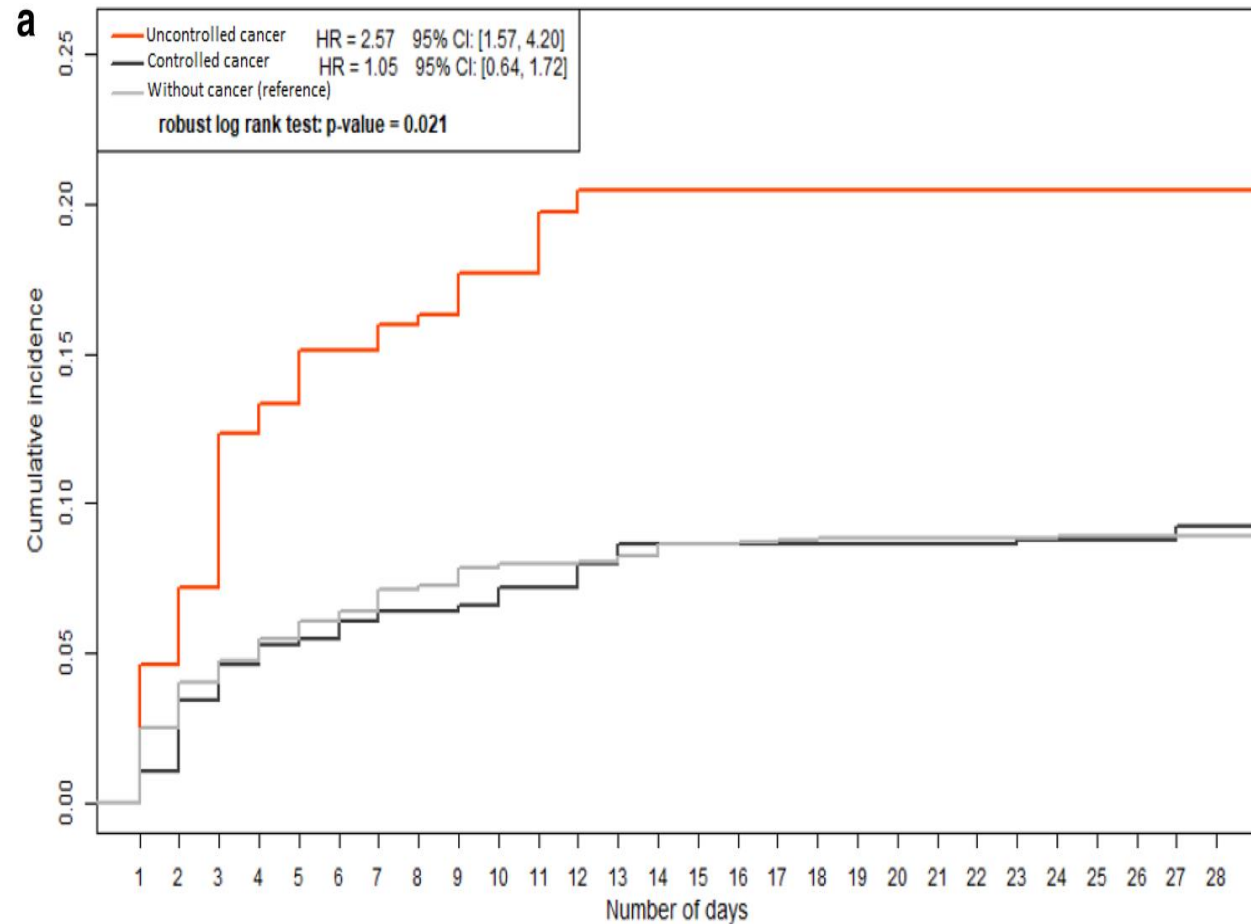
117 patients avec cancer non contrôlé (9,4% de KBP)

270 patients avec cancer contrôlé (6,7% KBP)

Perception de prise en charge excessive



Des décisions évaluées régulièrement



Discussion avec les oncologues

Réanimation d'attente

Réanimation d'attente

Who

Patients with an uncertain prognosis and/or unclear preferences

When

- *Before admission:*
 - Uncertain effect of treatment on chances of functional recovery or QOL
 - Disagreement with patient/family
 - Uncertain goals of the patient
- *During ICU stay*
 - Unexpected complications with uncertain effect on outcome or QOL
 - In case of disagreement between care team and patient/family

Time Limited Trial: an agreement to initiate all necessary treatment for a certain period of time

Duration

Optimal duration is customized care

Communication

- Use clear and concise communication
- Get insight in specific values, goals and preferences
- Set a timeframe for reevaluation
- Define potential actions at the end of the TLT

Goals

- Set specific narrow goals when appropriate (changes in APACHE II, SOFA, lactate levels, vasoactive support etc.)
- Focus on patient/family perception of improvement
- Get insight in expected quality of life and functional status following ICU survival using pre-admission QOL

Evaluation

- Improvement → continue treatment
- Unchanged or worsened → dependent on discussion at the start of the TLT: consider prolongation of the TLT or change treatment to comfort care/withdraw organ support

Durée réanimation d'attente?

Estimation de la probabilité de survie selon le type d'objectif
Pour les patients avec tumeurs : réanimation d'attente 1-4 jours

Table 2. Probability of Survival to 30 Days Under Different Strategies, Stratified by Admission Sequential Organ Failure Assessment (SOFA) Score^a

SOFA Score	Mean (95% CI), %			
	Aggressive Care	3-d Trial	8-d Trial	15-d Trial
All patients				
5-9	74.6 (74.3-75.0)	48.4 (48.0-48.8)	60.6 (60.2-61.1)	66.8 (66.4-67.2)
10-14	48.4 (48.0-48.8)	36.2 (35.8-36.6)	44.1 (43.6-44.5)	46.1 (45.6-46.5)
15-20	8.8 (8.5-9.0)	5.8 (5.6-6.0)	8.1 (7.9-8.3)	8.3 (8.1-8.6)
Patients with solid tumors				
5-9	62.8 (62.4-63.2)	11.8 (11.6-12.1)	30.8 (30.4-31.2)	45.1 (44.7-45.6)
10-14	36.6 (36.2-37.1)	18.6 (18.2-18.9)	33.0 (32.6-33.4)	36.2 (35.8-36.6)
15-20	1.6 (1.5-1.7)	<0.001 (0-0.1)	0.8 (0.8-0.9)	1.5 (1.4-1.6)

Conclusion

- État général.
- Stade de la maladie.
- Réversibilité des défaillances.
- Discussions quotidiennes avec oncologue.
- Projet après la réanimation.
- Tenir compte des progrès thérapeutiques.
- Evaluation régulière de l'impact de la réanimation.