

Ketamine for intractable chronic cancer pain

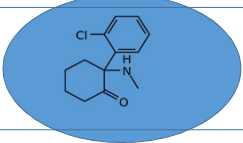
Results of the real life prospective multicenter French Cohort KETACANCER

Gisèle Chvetzoff, Julien Gautier, Frédérique Bisiaux, Claire Bergeonneau, Estelle Botton, Muriel Thommaso, Rita Kortbaoui-Saad, Raphael Renambatz-Ichambe, Katel Menard, Nathalie Créteanu, Timothée Marchal, Ivana Sondarjee, Sonia Brasy. Sullivan Gérard, David Pérol, Amelie Anota

INTRODUCTION : ketamine and cancer pain

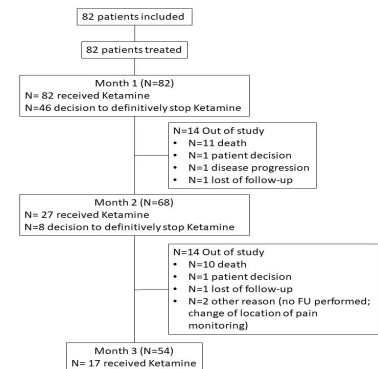
Chronic pain related to cancer or its treatment remains one of the most frequent symptoms in oncology and has a strong impact on quality of life [1]. Despite available treatments, especially opioids and anti-neuropathic drugs, about 10% to 15% of patients experiment refractory pain [2-3].

Ketamine is an antagonist of the N-methyl-D-aspartate (NMDA) receptor, which is involved in the transmission of pain signals, allodynia and hyperalgesia, long term potentiation and opioid tolerance [4]. Although widely used alone or as an adjuvant of opioid for refractory chronic non cancer and cancer pain, clinical evidence remains low and ESMO asks for larger studies [3].



METHOD : KETACANCER is a prospective multicenter observational study

- **Main objective:** to describe real-world **ketamine indications and protocols** in adults cancer patients in French comprehensive cancer pain units.
- **Secondary objectives :** to describe at 1 and 3 months (M1 and M3)
 - **efficacy** defined as
 - 2 points reduction in visual analog scale (VAS)
 - and/or percentage of pain relief estimated by patient more than 30% (PGIC).
 - **anxiety and depression** (HADS)
 - **side effects**



General characteristics	N=82 (100%)
Age (years)	55 (15)
• Mean (SD)	56 (23-82)
• Median (SD)	
Gender	
• men	42 (51.2%)
• women	40 (48.8%)
Metastasis	
• No	32 (39%)
• Yes	50 (61%)
Performance status	
• 0-1	33 (40.7%)
• ≥ 2	49 (59.3%)
• missing	1

RESULTS
82 patients
10 centers

Pain relief	M1 N = 71	M3 N = 41
VAS difference		
• N	55	34
• Mean	- 1.1 (2.3)	-2.3 (2.7)
• Median	- 1.0 (-7;3)	-2.0 (68;3)
Percentage of pain relief		
• N	48	27
• Mean	36.0 (28.3)	38.9 (30.8)
• Median	30.0 (0;100)	35.0 (0;100)
Analgesic effectiveness		
• yes	38 (66.7%)	27 (79.4%)
• no	19 (33.3%)	7 (20.6%)
• missing	14	7

Anxiety and depression	Baseline N = 82	M1 N = 71	M3 N = 41
Score of anxiety			
• N	77	40	31
• Mean (SD)	9.4 (4.1)	8.0 (4.1)	7.1 (3.9)
• Median (Min-max)	10.0 (0;20)	8.0 (1;16)	7.0 (0;15)
Score of depression			
• N	77	50	31
• Mean (SD)	7.8 (4.1)	7.4 (4.4)	6.2 (4.6)
• Median (Min-max)	7.0 (1;18)	6.5 (0;15)	6.0 (1;16)

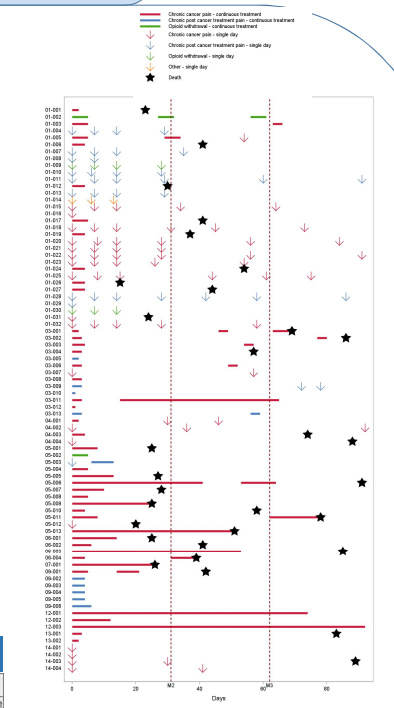
Discussion

- **Heterogeneity within procols (from single dose to long term continue infusion)**
- **Even if limited by the small sample. efficacy at M1 and M3 for a large majority of patients**
- **Link between efficacy and anxiety**
- **Low toxicity**

Need for largest randomized trials

	Ketamine indications and administration				All
	Cancer pain	Pain related to cancer treatment	Opioid withdrawal	Other	
M1	N = 59	N=18	N=4	N = 1	N=82
IV	54 (91.5%)	13 (72.2%)	3 (75%)	1 (100%)	71 (86.6%)
S/C	5 (8.5%)	5 (27.8%)	1 (25%)	0	11 (13.4%)
Continuously	28 (47.5%)	6 (33.3%)	2 (50%)	0	36 (43.9%)
Discontinuously	31 (52.5%)	12 (66.7%)	2 (50%)	1 (100%)	46 (56.1%)
dose mg/kg/d	1.01 (0.46)	0.91 (0.27)	1.2 (0.24)	0.5 (.)	0.99 (0.42)
Mean (SD)	1 (0;1;1.5)	1 (0.4;1.5)	1.15 (1;1.5)	0.5 (0;0.5)	1 (0;1;1.5)
M2	N=22	N=4	N=1	N=0	N=27
IV	21 (95.5%)	2 (50%)	1 (100%)		24 (88.9%)
S/C	1 (4.5%)	2 (50%)	0		3 (11.1%)
Continuously	7 (31.8%)	0	1 (100%)		8 (29.6%)
Discontinuously	15 (68.2%)	4 (100%)	0		19 (70.4%)
dose mg/kg/d	0.93 (0.41)	0.88 (0.15)	1.5 (.)		0.94 (0.39)
Mean (SD)	0.85 (0;3;0.85)	0.90 (0.7;1)	1.5 (1.5;1.5)		0.90 (0.3;1.5)
M3	N = 14	N = 3	N = 0	N = 17	
IV	12 (85.7%)	3			15 (88.2%)
S/C	1 (7.1%)	0			1 (5.1%)
Oral	1 (7.1%)	0			1 (5.1%)
Continuously	5 (38.5%)	0			5 (31.3%)
Discontinuously	8 (61.5%)	3 (100%)			11 (68.7%)
Missing	1				1
dose mg/kg/d	0.96 (0.47)	0.63 (0.40)			0.91 (0.47)
Mean (SD)	0.85 (0.3;1.5)	0.70 (0.2;1)			0.8 (0.2;1.5)

Side effects	All treated patients N=82				
	1	2	3	4	Any grade
CARDIAC DISORDERS					
• ANGINA PECTORIS	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
• CARDIAC FAILURE	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
EAR AND LABYRINTH DISORDERS					
• VERTIGO	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
GASTROINTESTINAL DISORDERS					
• NAUSEA	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
GENERAL DISORDERS AND ADMINISTRATION SITE CONDITIONS					
• FATIGUE	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
INVESTIGATIONS					
• BLOOD PROLACTIN ABNORMAL	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
NERVOUS SYSTEM DISORDERS					
• HEADACHE	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
• MEMORY IMPAIRMENT	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
• PARAESTHESIA	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
• SOMNOLENCE	4 (4.9%)	0 (0.0%)	2 (2.4%)	1 (1.2%)	7 (8.5%)
• TREMOR	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
PSYCHIATRIC DISORDERS					
• ANXIETY	0 (0.0%)	2 (2.4%)	0 (0.0%)	1 (1.2%)	3 (3.7%)
• HALLUCINATION	2 (2.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (2.4%)
• IRRITABILITY	1 (1.2%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
• SUICIDAL IDEATION	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
RENAL AND URINARY DISORDERS					
• URINARY RETENTION	0 (0.0%)	0 (0.0%)	1 (1.2%)	0 (0.0%)	1 (1.2%)
REPRODUCTIVE SYSTEM AND BREAST DISORDERS					
• AMENORRHOEA	0 (0.0%)	1 (1.2%)	0 (0.0%)	0 (0.0%)	1 (1.2%)
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS					
• ACUTE RESPIRATORY DISTRESS SYNDROME	0 (0.0%)	0 (0.0%)	1 (1.2%)	0 (0.0%)	1 (1.2%)
VASCULAR DISORDERS					
• HYPERTENSION	1 (1.2%)	0 (0.0%)	3 (3.7%)	0 (0.0%)	4 (4.9%)



Decision to stop ketamine	N=82
• No	20 (24.4%)
• Yes	62 (75.6%)

Reasons	N=82
• Lack of efficacy	18 (22.0%)
• Achieving pain pain relief or opioid withdrawal	11 (13.4%)
• Toxicity	10 (12.2%)
• Death	10 (12.2%)
• Investigator decision	2 (2.4%)
• Patient decision	1 (1.2%)
• Other	10 (12.2%)