Poster FPN 2389P

Final analysis of patients treated with [177Lu]Lu-PSMA-617 in early access program in metastatic castration-resistant prostate cancer (mCRPC) in France

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KEY FINDINGS & CONCLUSIONS

- An early access program (EAP) has been granted to [177Lu]Lu-PSMA-617 in France, for patients with progressive mCRPC expressing PSMA, previously treated with ≥1 taxane chemotherapy and ≥1 ARPI.
- From December 01, 2021 to April 29, 2025, **3709 PSMA-PET-positive mCRPC patients were included in this EAP**.
- Over time, **patients profile seems to remain quite stable**.
  - Even though patients seems to be older and present lower PSA levels.
  - They were also **less heavily pretreated** (ARPI, taxane chemotherapy).
- Patients who received **two taxane-based chemotherapy appear to progress more rapidly** than those who received one.
- Patients receiving **concomitant ARPI seem to progress more slowly** than those who did not.
- **No new safety signal have been identified,** most safety signals are considered to be expected.

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https://tinyurl.com/VincentMassard2389P

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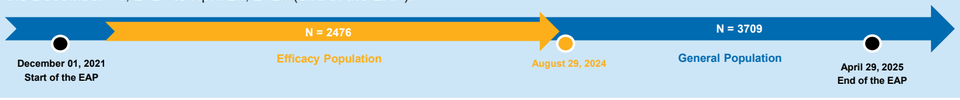
INTRODUCTION

- [177Lu]Lu-PSMA-617 is a radiopharmaceutical with binding affinity to the **prostate specific membrane antigen (PSMA)**, expressed in 90% of **metastatic castration resistant prostate cancer (mCRPC)** [1].
- The VISION study showed that [177Lu]Lu-PSMA-617 combined with best standard of care, **prolonged imagine-based progression-free and overall survival** in patients with PSMA-positive mCRPC, previously treated with at least one taxane-based chemotherapy and one androgen receptor pathway inhibitors (ARPI) [2]. An **Early Access Programm** (EAP) has been granted to [177Lu]Lu-PSMA-617 by French Health Authorities for patients in this indication. This EAP began on December 01, 2021, and ended on April 29, 2025.
- This work is a descriptive analysis comparing the **characteristics, safety, and efficacity of [177Lu]Lu-PSMA-617** in patients treated in France as part of Early Access Program, with comparisons stratified by year of patient inclusion in the EAP.
- These are exploratory results, generating hypotheses that will need to be validated by further studies.

METHODS

- [177Lu]Lu-PSMA-617 was given to **patients with progressive mCRPC overexpressing PSMA, previously treated with ≥ 1 taxane chemotherapy and ≥ 1 ARPI**. They received intravenous administrations of [177Lu]Lu-PSMA-617 once every 6 weeks for up to 6 cycles.
- In order to ensure a minimum of 8-month follow-up after the first injection and to obtain a homogeneous population providing a greater robustness in the presented results, the efficacy data focused on patients included from December 01, 2021 to August 29, 2024 (data cut-off 1, DCO 1). Patient's characteristics and safety data were described from the total patient population included in this EAP, from the December 01, 2021 to April 29, 2025 (end of the EAP).



RESULTS

- Since December 01, 2021, 3709 patients with mCRPC and PSMA-PET-positive imaging, pretreated with ≥ 1 taxane chemotherapy and ≥ 1 ARPI were included in this EAP.
- Patient characteristics are described in **Table 1**.

GENERAL POPULATION

Table 1. Patient characteristics at baseline

Characteristics	Patients included in EAP (n = 3709)	2022 (n = 642)	2023 (n = 934)	2024 (n = 1539)	2025 (n = 585)
Age - years					
Median (range)	73.8 (37.0-100.0)	**73.0** (45.7–91.6)	**73.7** (37.3–92.2)	**74.1** (46.3–99.8)	**74.3** (46.5–91.3)
≥ 75 years – n (%)	1602 (43.2)	239 (37.2)	396 (42.4)	699 (45.4)	266 (45.5)
≥ 85 years – n (%)	199 (5.4)	36 (5.6)	43 (4.6)	92 (6.0)	28 (4.8)
ECOG performance status score – n (%)					
0-1	3223 (87.0)	551 (85.8)	822 (88.1)	1349 (87.8)	494 (84.5)
2	465 (12.5)	85 (13.2)	106 (11.4)	182 (11.8)	90 (15.4)
Sites of disease – n (%)					
Lymph node	2208 (59.5)	**407 (63.4)**	**545 (58.4)**	**915 (59.5)**	**336 (57.4)**
Bone	3417 (92.1)	**604 (94.1)**	**867 (92.8)**	**1411 (91.7)**	**526 (89.9)**
Liver	307 (8.3)	69 (10.7)	72 (7.7)	118 (7.7)	45 (7.7)
Lung	305 (8.2)	68 (10.6)	73 (7.8)	120 (7.8)	43 (7.4)
Prostate-specific antigen (PSA) – ng/ml					
Median (range)	41.6 (0.0-6972.0)	**79.3** (0.0-4562.0)	**46.1** (0.0-6972.0)	**33.0** (0.0-6680.0)	**29.9** (0.0-3987.0)
Creatinine clairance – n (%)					
≥ 60	3338 (90.0)	581 (90.5)	836 (89.5)	1382 (89.8)	530 (90.6)
30 – 60	334 (9.0)	51 (7.9)	87 (9.3)	143 (9.3)	53 (9.1)
100% of PSMA-positive lesions – n (%)					
Yes	2641 (71.3)	**490 (76.3)**	**736 (78.8)**	**1047 (68.2)**	**363 (62.1)**
Median time between TEP positive and injection – days	32	**38**	**35**	**30**	**26**

- Over time, patients included in EAP were **older** and tended to have a **lower PSA levels. Fewer** of them had 100% PSMA-positive lesions and metastases at inclusion.

Previous treatments received

- Previous treatments have been compared in populations over the years. Results are described in **Table 2**.

GENERAL POPULATION

Table 2. Previous treatments received

Treatments	Patients included in EAP (n = 3709)	2022 (n = 642)	2023 (n = 934)	2024 (n = 1539)	2025 (n = 585)
ARPI– n (%)					
1	1811 (48.8)	205 (31.9)	407 (43.6)	858 (55.8)	340 (58.1)
≥ 2	**1898 (51.2)**	**437 (68.1)**	**527 (56.4)**	**681 (44.2)**	**245 (41.9)**
Taxane-chemotherapy– n (%)					
1	2142 (57.8)	203 (31.6)	484 (51.8)	1012 (65.8)	441 (75.4)
2	**1532 (41.3)**	**422 (65.7)**	**432 (46.3)**	**527 (34.2)**	**144 (24.6)**
Chemo-naive (CI)	35 (0.9)	17 (2.6)	18 (1.9)	0 (0.0)	0 (0.0)
Internal Radiotherapy – n (%)					
Yes	103 (2.8)	9 (1.4)	41 (4.4)	38 (2.5)	15 (2.6)
- ^{223}Radium	98 (95.1)	9 (100.0)	40 (97.6)	34 (89.5)	15 (100.0)
PARP inhibitors – n (%)					
Yes	**189 (5.1)**	**30 (4.7)**	**34 (3.7)**	**89 (5.8)**	**36 (6.2)**
Number of systemic treatments – n (%)					
Median	3	4	3	3	3

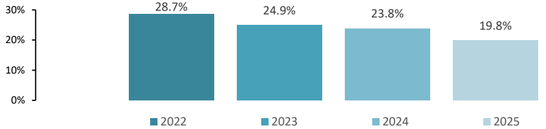
- Patients are progressively **less heavily pre-treated** with chemotherapies anddd ARPIs.

Concomitant treatment

GENERAL POPULATION

- Among the general population (n = 3709), **24.4%** of patients received concomitant ARPI treatment.

Figure 1. Concomitant ARPI treatment



Progression-Free Survival (n = 2476 patients)

EFFICACY POPULATION

- Imaging follow-up was performed according to investigators' choice, with an unknown distribution between conventional imaging, PSMA-PET, and SPECT/CT.

Table 3.

		Imaging-based evaluation	Clinical evaluation	PSA evaluation
Median PFS – months (range)		**7.6** (0.0 – 18.4)	**8.1** (0.0 – 20.9)	**4.0** (0.0 – 19.1)
Best response obtained	Improvement	42.0	48.5	69.8
	Stabilization	23.1	46.8	12.3
	Progression	33.0	4.7	17.2

Table 4. Subanalyses

		Imaging-based evaluation	Clinical examination	PSA evaluation
Previous taxane CT	One (n = 1240)	7.7	8.4	4.7
	Two (n = 1201)	6.8	7.5	3.5
	*p-value**	0.0115 (S)	<0.0001 (S)	0.0003 (S)
ARPI concomitant	Yes (n = 573)	7.9	8.4	4.9
	No (n = 1903)	7.2	8.0	3.8
	*p-value**	<0.0001 (S)	<0.0001 (S)	0.0041 (S)

- Patients pretreated with **two taxane chemotherapies (CT)** or **not receiving concomitant ARPI seems to progress quickly** than those who received one CT or concomitant ARPI.

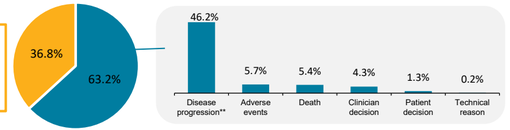
Treatment discontinuation (n = 3709 patients)

GENERAL POPULATION

Figure 2. Causes of early treatment discontinuation

- Among the General Population, 2435 patients completed an end of treatment form. The causes of treatment discontinuation are described in **Figure 2**.

More than 1/3 of the patients received the planned 6 cycles.



- **No new safety signal have been identified.**
- **465/3709** (12.5%) patients were affected by at least one adverse event (AE). **908** AEs were reported. The most common were ***haematotoxicities*** (thrombocytopenia and anemia).

** p-value was statistically analyzed using the Mann-Whitney test. This exploratory analysis is univariate.*
***Among the 1124 patients with disease progression, 22 (2.0%) had received 6 cycles*

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Conflicts of interest

VM : Advanced Accelerator Applications-Novartis, Astellas, Bayer, Johnson&Johnson, Pfizer ; **CB** : Boston Scientific, Advanced Accelerator Applications-Novartis, Sirtex Medical, Telix Radiopharmaceuticals ; **PO** : None ; **LV** : None ; **ALG** : Novartis, Curium ; **GR** : Ipsen, Bristol-Myers Squibb, MSD, Pfizer, Johnson&Johnson, AstraZeneca, Amgen, Merck, Eisai, Gilead, Bayer, Advanced Accelerator Applications, Seagen ; **SG** : Advanced Accelerator Applications-Novartis ; **SA** : None ; **CV** : Bristol-Myers Squibb, MSD, Advanced Accelerator Applications-Novartis ; **AF** : Advance Accelerator Applications-Novartis, Astellas, AstraZeneca, Bayer, Bristol-Myers Squibb, Gilead, Ipsen, Johnson&Johnson, MSD, Novartis, Pfizer, Roche/GenTech, Sanofi/Aventis ; **SC** : Advanced Accelerator Applications-Novartis ; **YG** : Eisai, Bayer, Ipsen, Advanced Accelerator Applications-Novartis, Lilly, Roche.

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