



T-3

Impact of Baseline Liver Tumor Burden, Alkaline Phosphatase (ALP) Elevation, and Target Size Lesion on Therapeutic Effect of ¹⁷⁷Lu-Dotatate Treatment: Analysis of Progression Free Survival, and Safety in NETTER-1 Study

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BACKGROUND: To assess the impact of baseline liver tumor burden (LTB), alkaline phosphatase (ALP) elevation, and target lesion size on treatment outcomes with ¹⁷⁷Lu-DOTATATE in the NETTER-1 study population.

METHODS: Patients (pts) were randomized to receive either ¹⁷⁷Lu-DOTATATE (Lu)(n=117) or high-dose octreotide 60 mg (Oct) (n=114). At the time of the primary PFS analysis, 229 pts had been enrolled. Baseline LTB was categorized as low (<25%), moderate (25%-50%), or high (>50%) according to estimated liver tumor volume divided by the total liver volume by computed tomography (CT) or magnetic resonance imaging (MRI). PFS was stratified by baseline LTB, ALP

elevation and presence or absence of a large target lesion (>30 mm) at any site of the body on CT or MRI.

RESULTS: Table 1 shows median PFS (months) in pts with low, moderate and high LTB, normal and elevated ALP, and with and without large target lesion. PFS was significantly prolonged with Lu compared with Oct regardless of LTB; elevated ALP, or presence of a large target lesion. Within the Lu arm, no significant difference in PFS was observed among pts with different baseline LTB or with normal or elevated baseline ALP, but the absence of a large target lesion at baseline was associated with improved PFS (P=.0222). Grade 3 and 4 liver function abnormalities were rare and not associated with high baseline LTB in either arm of the study and resolved without sequela.

CONCLUSION: 177Lu-DOTATATE demonstrated significant prolongation in PFS compared with high-dose octreotide LAR in patients with advanced, progressive midgut NET, regardless of baseline liver tumor burden, elevated ALP, or the presence of a large target lesion.

Table 1: Median Progression Free Survival in patients with low, moderate and high liver tumor burden, normal and elevated ALP and with and without large target lesion.

	Median Progression Free Survival (months)		
	177Lu-DOTATATE	High-dose octreotide	
Low liver tumor burden (n=141)	NR (n:71)	9.10 (n:70)	(HR, 0.187; P <.0001)
Moderate liver tumor burden (n:39)	NR (n:26)	8.74 (n:13)	(HR, 0.216; P=.0098)
High liver tumor burden (n:49)	NR (n:19)	5.42 (n:30)	(HR, 0.145; P=.0018)
Normal ALP level (n*:146) (n*: patient's number who had evaluable baseline ALP level were included.)	NR (n:71)	8.54 (n:75)	(HR, 0.153; P<.0001)
Elevated ALP level(n*:78)	NR (n:41)	5.78 (n:37)	(HR, 0.177; P<.0001)
Without large target lesion (n:76)	NR (n:37)	8.31 (n:39)	(HR, 0.063; P=0.0002)
With large target lesion (>30 mm) (n:153)	NR (n:79)	8.54 (n:74)	(HR 0.21; P<0.0001)

NR: Not reached. n: patients' number.