

Lymphoseek (Tilmanocept) Market Potentials

2008 -2011 Cancer incidence (base data Globocan/2008)

	<u>U.S.</u>	<u>Europe (EURO)</u>	<u>Balance of More developed regions</u>	<u>ROW - Less Developed regions</u>
Breast (Both Ph. III trials complete)	230,480	450,322	59,852	691,521.00
Melanoma (Both Ph. III trials complete)	70,230	88,510	18,068	30,569.00
Head & Neck Squamous Cell Carcinoma (Larynx + Pharynx + Oral cavity) (Ph. III trial underway)	55,000	143,825	12,955	430,419.00
Colorectal (Phase I trial closed)	153,881	450,621	124,048	506,558.00
Prostate (Phase I trial closed)	<u>223,307</u>	<u>379,097</u>	<u>78,627</u>	<u>255,058.00</u>
Total: Breast + Melanoma + H&N + Colorectal + Prostate ONLY	732,898	1,512,375	293,550	1,914,125.00
All other solid tumor cancer types (Gastric, lung, bladder, pancreas, etc.)	<u>523,821</u>	<u>1,286,647</u>	<u>289,320</u>	<u>3,235,380.15</u>
Total (All types)	1,256,719	2,799,022	582,870	5,149,505.15

Revenue

Lymphoseek estimated retail selling price in U.S.	\$300
Lymphoseek estimated selling price in ex-U.S. markets (30% of U.S. price)	\$90

	<u>U.S.</u>	<u>Europe (EURO)</u>	<u>Balance of More developed regions</u>	<u>ROW - Less Developed regions</u>
Lymphoseek market potential (Breast, Melanoma, H&N, Colorectal, Prostate only)	\$219,869,400	\$136,113,750	\$26,419,500	\$172,271,250
Lymphoseek total market potential including all solid tumor cancer types	\$377,015,655	\$251,911,971	\$52,458,287	\$463,455,464

Total Market Potential - Aggregated by market & indication

U.S. (B/M/H&N/C/P)	\$219,869,400
U.S. - All cancer types	\$377,015,655
U.S. + Europe (B/M/H&N/C/P)	\$355,983,150
U.S. + Europe - All cancer types	\$628,927,626
U.S. + Europe + MDR (B/M/H&N/C/P)	\$382,402,650
U.S. + Europe + MDR - All cancer types	\$681,385,913
U.S. + Europe + MDR + ROW (B/M/H&N/C/P)	\$554,673,900
U.S. + Europe + MDR + ROW - All cancer types	\$1,144,841,376
% of cases subject to SLNB (range 68-77%)	70%
% of revenue payable to Navidea in U.S. (range 50-53%)	50%

Total Potential Gross Revenue to Navidea

U.S. (B/M/H&N/C/P)	\$76,954,290
U.S. - All cancer types	\$131,955,479
U.S. + Europe (B/M/H&N/C/P)	\$172,233,915
U.S. + Europe - All cancer types	\$308,293,859
U.S. + Europe + MDR (B/M/H&N/C/P)	\$190,727,565
U.S. + Europe + MDR - All cancer types	\$345,014,660
U.S. + Europe + MDR + ROW (B/M/H&N/C/P)	\$311,317,440
U.S. + Europe + MDR + ROW - All cancer types	\$669,433,484

All estimates based a single dose/SLN procedure per patient

Note: ASP of Isosulfan Blue (BD) = \$162
Low end price of Sulfur Colloid (SC w/Tc99 isotope incl.) = \$130
Total combined price of SC + BD = \$292

More developed regions: All regions of Europe (incl Russian Federation) plus North America (excl: Mexico), Australia/New Zealand and Japan.
Less developed regions: All regions of Africa, Asia (excl. Japan), Latin America (inc. Mexico) and the Caribbean, Melanesia, Micronesia and Polynesia.

Cancer types "Other" include: Esophageal, pancreas, stomach/gastric, vulvar, colorectal, penile, testicular, bladder, cervical, endometrial, prostate, thyroid, non-small cell lung cancer, Merkel cell carcinoma and soft tissue carcoma

Sources:
<http://globocan.iarc.fr/>
<http://www.cdc.gov>
<http://www.entnet.org/HealthInformation/headNeckCancer.cfm>
<http://www.cancer.gov/aboutnci/servingpeople/snapshots/melanoma.pdf>
<http://eu-cancer.iarc.fr/cancer-11-melanoma-of-skin.html,en#block-9-33>
<http://eu-cancer.iarc.fr/cancer-13-breast.html,en#block-9-27>
<http://eu-cancer.iarc.fr/cancer-0-oral-cavity-and-pharynx.html,en>
<http://www.euro.who.int/en/home>
http://www.breastcancer.org/symptoms/understand_bc/statistics.jsp
<http://onlinelibrary.wiley.com/doi/10.3322/canjclin.49.1.33/full>
<http://www.gene.com/gene/products/education/oncology/lungcancerfact.html>