Eliquis Market Forecast in Germany

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1406

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Agenda

- Introduction
- Problem Statement
- Research Question
- Objective
- Methodology
- Model Flow
- Assumptions
- Results -- Dynamic Patient Share

  -- Ongoing Patient Share

  -- Treatment Day Share

  -- Market Validation.

  -- Revenues
- Findings

Introduction

- **Eliquis is Bristol Myers Squib (BMS) product Marketed in 13 countries having molecule name *apixaban***
- **Eliquis is indicated for Atrial Fibrillation (AF) and Deep vein thrombosis(DVT)**
- **The prevalence of AF varies with age and sex. AF is present in 0.12%–0.16% of subjects younger than 49 years, 3.7%–4.2% of those aged 60–70 years, and 10%–17% of those aged 80 years or older**
- **In the general adult population of Europe is more than double that reported just one decade earlier, ranging from 1.9% in Italy, Iceland, and England to 2.3% in Germany and 2.9% in Sweden.**

Problem Statement

Eliquis has generated roughly cent percent growth in the previous year in terms of sales and now, management wants to have a similar kind of aggressive growth rate for the outer years and they also want to see the various scenarios if more number of patient can come or not.

Research Question

What will be the future growth rate of Eliquis (*apixaban*) for next 3 years in Germany?

Objective

- **To prepare a Patient based forecast model for Eliquis.**
- **To assess the no. of patients for Eliquis (*apixaban*) in Germany till 2018.**
- **To assess the revenue for Eliquis (*apixaban*) in Germany till 2018.**

Methodology

- **Type of Study- Secondary Data Analysis**
- **Data Collection tools- Secondary Data Sources(IMS Standard Reporting Sheet and Pharmafakt/Pharmascope ; Client Data Sources in Germany)**
- **Statistical Analysis Tool – MS Excel**

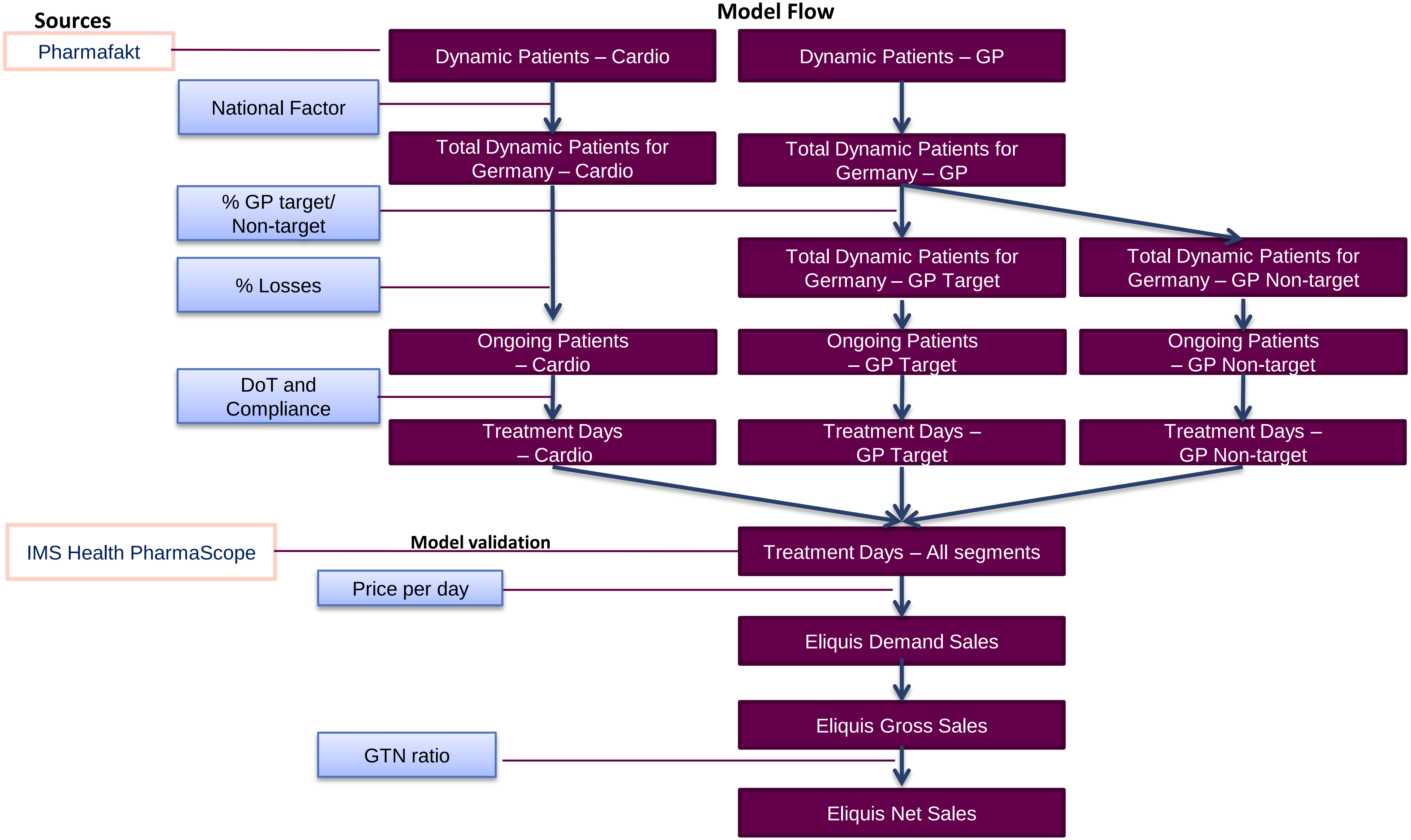
Methodology Details

- **Data Points are selected from data sources to make the forecast model after discussing with client.**

  > Part 1- Dynamic Patients Based Model.

  > Part 2- Prevalence Based Model.
- **Model flow is decided.**
- **Forecast is done.**

Model Flow Chart



Terminology

- **Dynamic Patients - Patients pool consists of 4 categories- New (those who have never taken treatment), Switch on (shifted to eliquis from some other drug), Switch off (changed the treatment) and losses (died or stop taking treatment).**
- **National Factor - a factor used to calculate the overall patients for the country.**
- **Losses - Those who left the therapy or died.**
- **Ongoing Patients - (Previous year patients + present year patients) – Losses**

Detail of Model Flow

- **Dynamic Patients (from Germany data sources; pharmafakt), segmented into to specialty and non-specialty which is cardio and GP.**
- **Total dynamic patients are calculated by applying national factor**
- **Total Dynamic patients- GP further segmented into GP target (General Practitioners which are on BMS list) and GP non-target (General Practitioners which are not on BMS list) by applying percentage split.**
- **Ongoing patients [(Previous month patients + Present month patients)- Losses] for 3 segments; Cardio, GP Target, and GP-Non-Target are calculated by applying losses percentage on Total Dynamic Patients for 3 segments**

Detail of Model Flow…

- **Treatment Day's (TD's) for all 3 segments are calculated by applying Days of therapy (DOT) and compliance**
- **Total TD's of all the segments are calculated by summing up the TD's of Cardio, GP Target and Non Target.**
- **Total TD of all the segments are validated with IMS health data month .**
- **Price Per Day(Assumption) is applied on Total TD's of all the segments to get the Eliquis Gross Sales.**
- **GTN Ratio(Assumption) is applied on Eliquis Gross Sales to get the Eliquis Net Sales.**

Assumptions

1.Dynamic Patients According To 3 Segments

Cardiac	2013	2014
Xarelto	11,582	12,034
Pradaxa	2,875	2,165
Eliquis	2,156	5,759

GP Target	2013	2014
Xarelto	102,300	116,612
Pradaxa	21,534	16,760
Eliquis	10,985	37,244

GP Non-Target	2013	2014
Xarelto	65,405	74,555
Pradaxa	12,647	9,843
Eliquis	4,935	16,733

Assumptions …

2. Split %age

Split %	2013	2014	2015	2016	2017	2018
Cardiac	7.1%	6.8%	6.6%	6.6%	6.6%	6.6%
GP - Target	65.0%	63.0%	62.0%	62.0%	62.0%	62.0%
GP - Non Target	27.9%	30.2%	31.4%	31.4%	31.4%	31.4%

3. National Factor

National Factor	2013	2014
Xarelto	38%	38%
Pradaxa	38%	38%
Eliquis	38%	38%
Edoxaban	0%	0%

4. Losses %age

Losses%	2013	2014	2015	2016	2017	2018
Xarelto	6%	5%	5%	5%	5%	5%
Pradaxa	6%	6%	5%	6%	6%	6%
Eliquis	7%	6%	5%	6%	6%	6%
Edoxaban	0%	0%	3%	4%	5%	5%

Assumptions …

5. DOT

DOT	2013	2014	2015	2016	2017	2018
Xarelto	365	365	365	365	365	365
Pradaxa	365	365	365	365	365	365
Eliquis	365	365	365	365	365	365
Edoxaban	365	365	365	365	365	365

6. Compliance

Compliance	2013	2014	2015	2016	2017	2018
Xarelto	80%	80%	80%	80%	80%	80%
Pradaxa	75%	75%	75%	75%	75%	75%
Eliquis	75%	75%	75%	77%	79%	80%
Edoxaban	80%	80%	80%	80%	80%	80%

7. Price Per Day

Price/day	2013	2014	2015	2016	2017	2018
Xarelto	€ 2.50	€ 2.50	€ 2.50	€ 2.50	€ 2.50	€ 2.50
Pradaxa	€ 2.50	€ 2.50	€ 2.50	€ 2.50	€ 2.50	€ 2.50
Eliquis	€ 2.63	€ 2.63	€ 2.63	€ 2.63	€ 2.63	€ 2.63
Edoxaban			€ 2.50	€ 2.50	€ 2.50	€ 2.50

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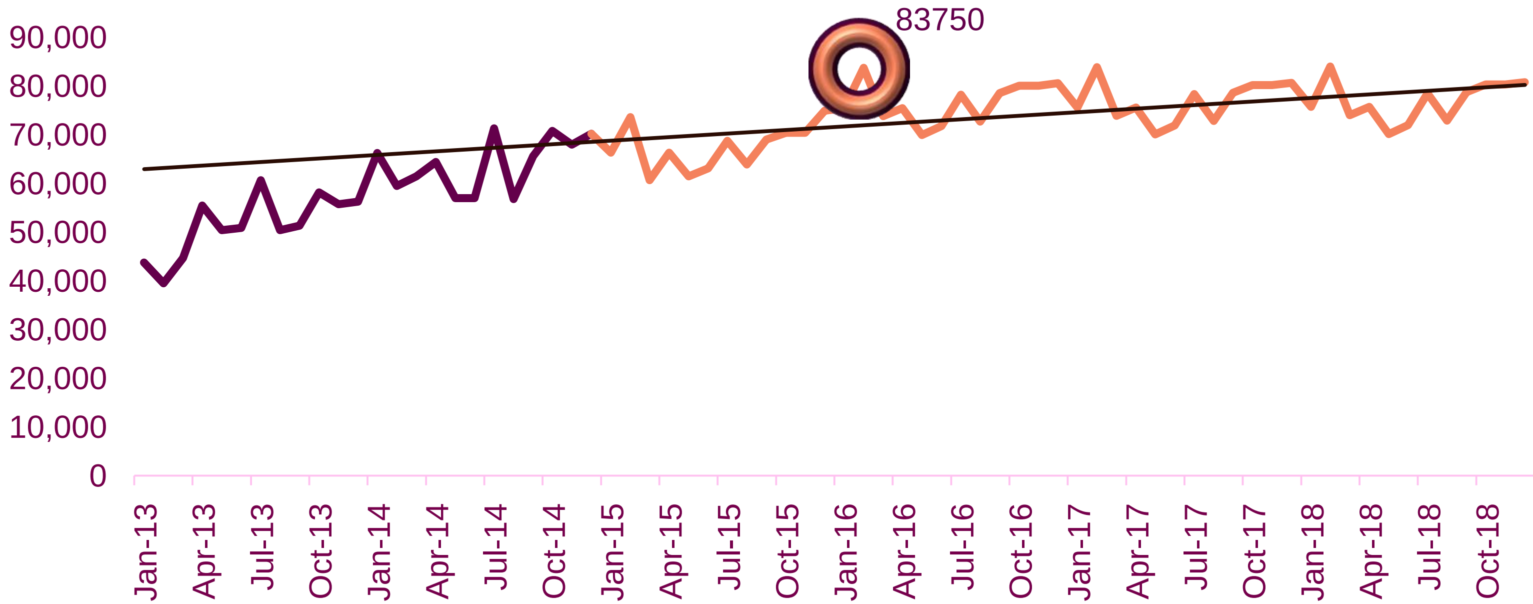
- Conclusion

Expected Maximum, NOAC Dynamic Patients is in Feb 16

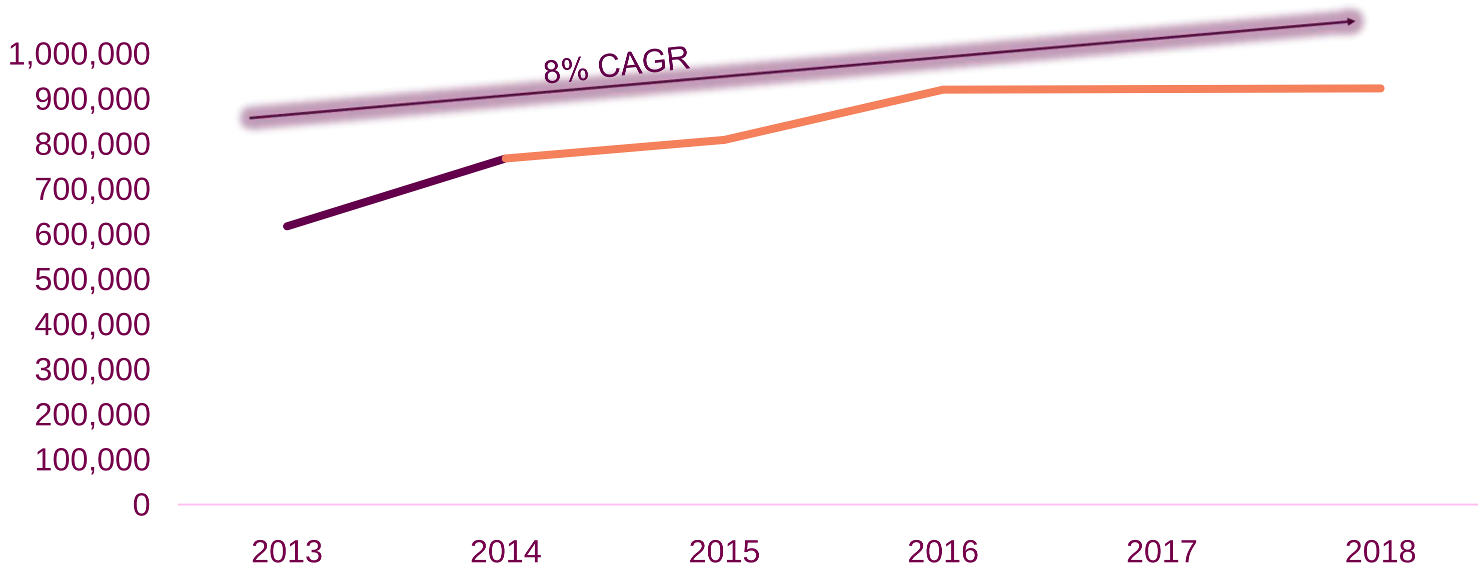
► Total NOAC Dynamic Patients Monthly



- Till Dec 2014 Actual patients are plotted and after that patients are forecasted which is shown in orange color.

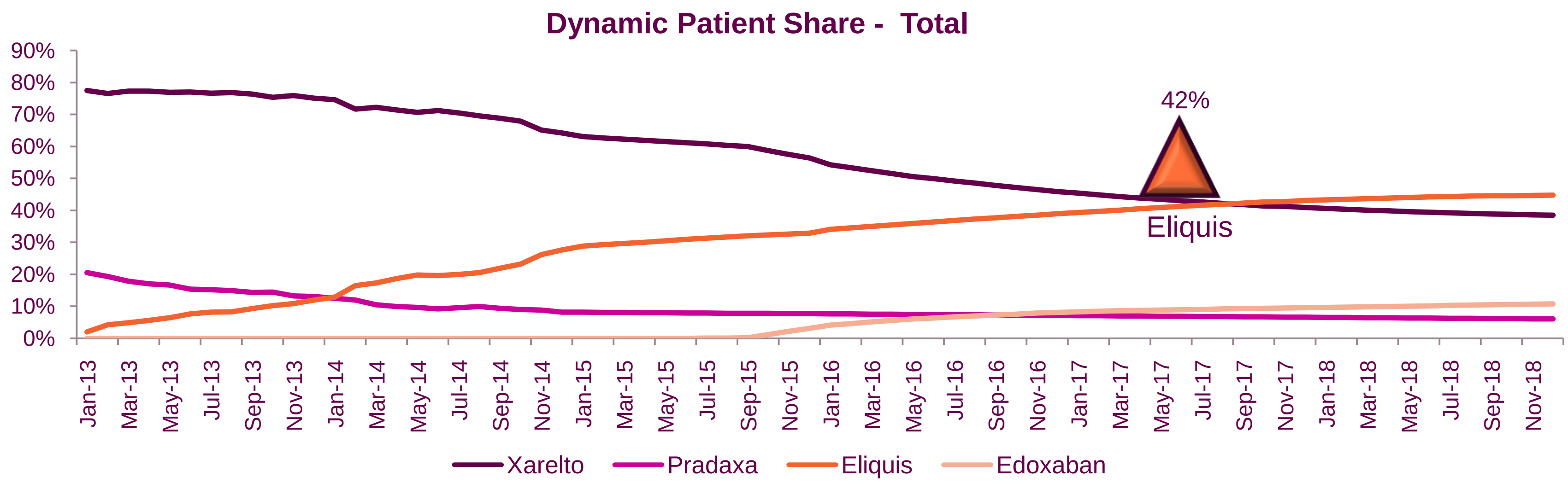
Total NOAC dynamic patients expected to increases by 8%CAGR from 2013 to 2018.

▶ Total NOAC Dynamic Patients Yearly



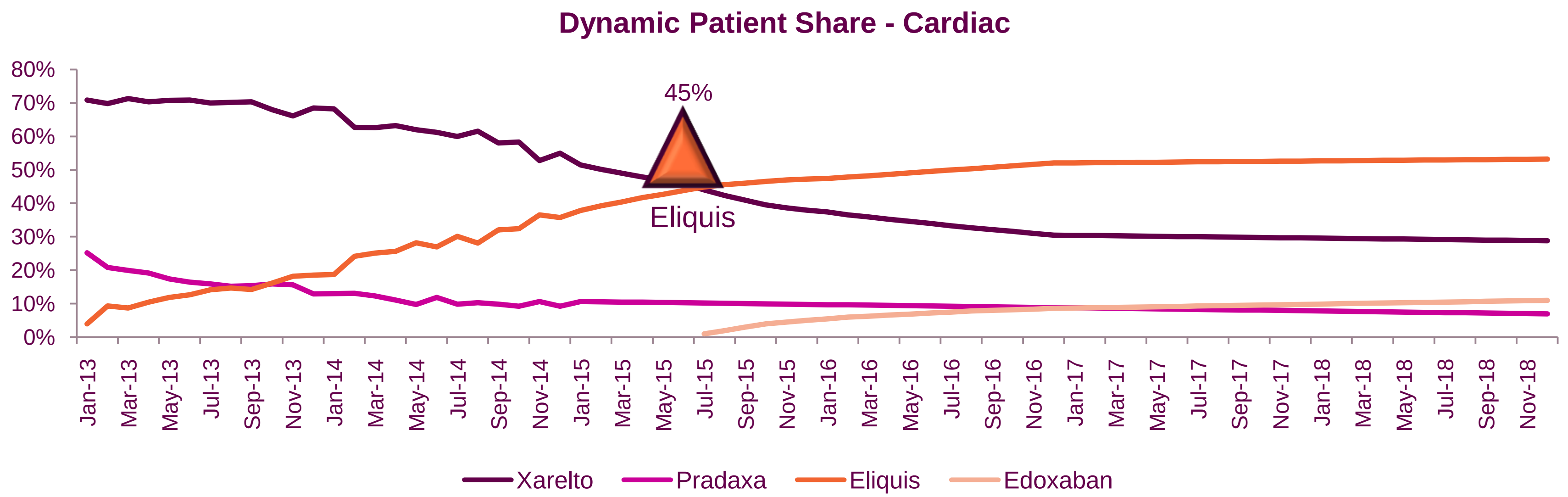
616,894 767,640 808,763 920,327 921,327 922,867

Eliquis expected to becomes market leader in with 42% share in Aug 17



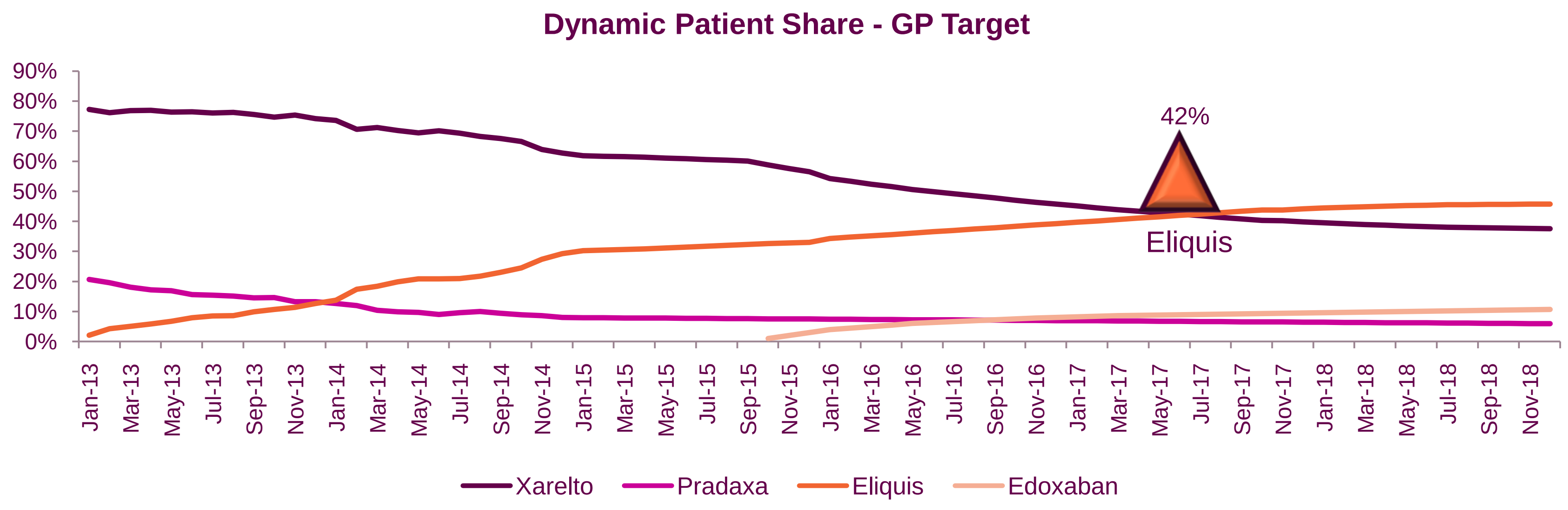
- Eliquis crossed Pradaxa in Jan- 14 having 13% of total market share.
- In Aug-17 it will cross Xarelto; the market leader with 42% share.

Eliquis expected to Becomes Market Leader in July 15 in Cardiac segment with 45% share.



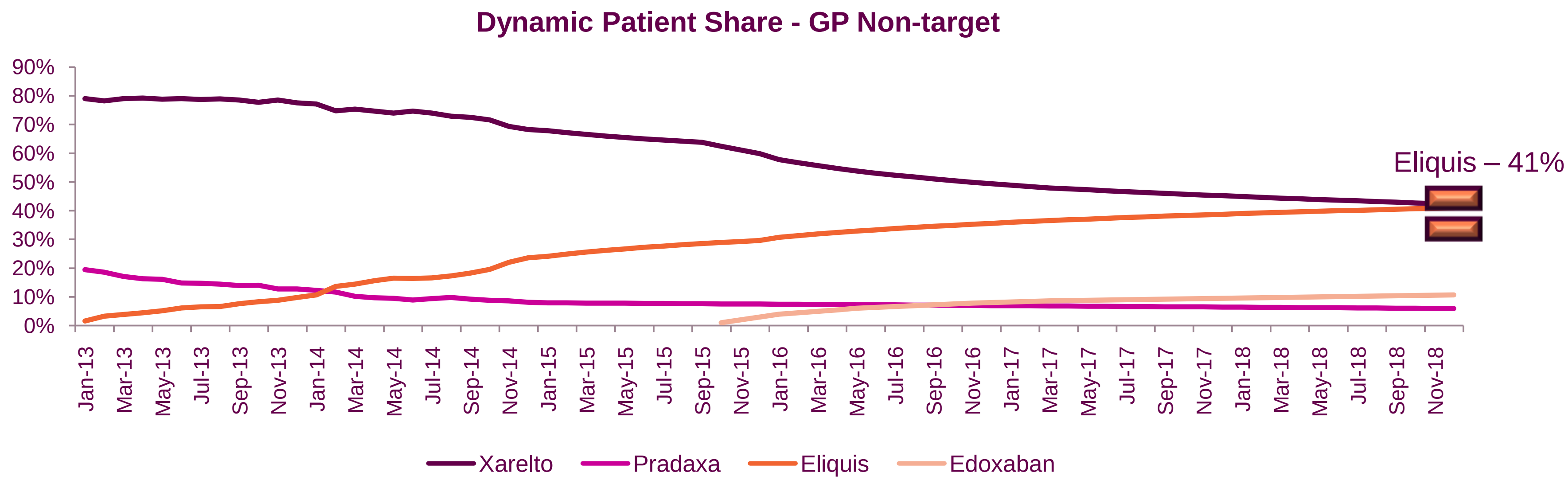
- Eliquis crossed Pradaxa at 16% share of the total market in Oct-13
- Eliquis crossed Xarelto, the market leader at 45% of total market share in july 15

Eliquis expected to Becomes Market Leader in July 17 in GP Target segment with 42% share.



- Eliquis crossed Pradaxa at 14% share of the total market in Jan-14
- Eliquis crossed Xarelto, the market leader at 42% of total market share in July- 17.

Eliquis expected to equalize its share with Xarelto in Dec 18 and Struggling to be a market leader



- Eliquis crossed Pradaxa at 14% share of the total market in Feb-14
- Eliquis is growing slowly as compare to Cardio and GP target segment and is equaling its patient share with Xarelto at 41% of total market share in Nov-18.

Eliquis Forecasted Dynamic Patients Yearly for 2018 is 12% more as compare to Xeralto.

Cardiac	2013	2014	2015	2016	2017	2018
Xarelto	30,479	31,668	23,796	20,502	18,277	17,795
Pradaxa	7,566	5,696	5,478	5,661	5,093	4,527
Eliquis	5,674	15,154	23,237	30,175	31,813	32,222
Edoxaban			1,735	4,404	5,625	6,365

GP Target	2013	2014	2015	2016	2017	2018
Xarelto	269,210	306,873	301,703	283,670	241,108	219,293
Pradaxa	56,669	44,105	38,941	41,399	38,527	35,670
Eliquis	28,909	98,009	158,282	209,728	240,606	259,138
Edoxaban			10,029	35,805	50,982	58,076

GP Non-Target	2013	2014	2015	2016	2017	2018
Xarelto	172,118	196,198	163,782	153,394	135,692	126,317
Pradaxa	33,282	25,903	19,722	20,967	19,512	18,065
Eliquis	12,988	44,033	69,178	96,488	108,272	115,986
Edoxaban			5,079	18,134	25,820	29,413

Total	2013	2014	2015	2016	2017	2018
Xarelto	471,807	534,739	489,281	457,566	395,077	363,405
Pradaxa	97,517	75,704	64,141	68,026	63,132	58,262
Eliquis	47,570	157,197	250,697	336,392	380,691	407,346
Edoxaban	0	0	16,842	58,343	82,426	93,854

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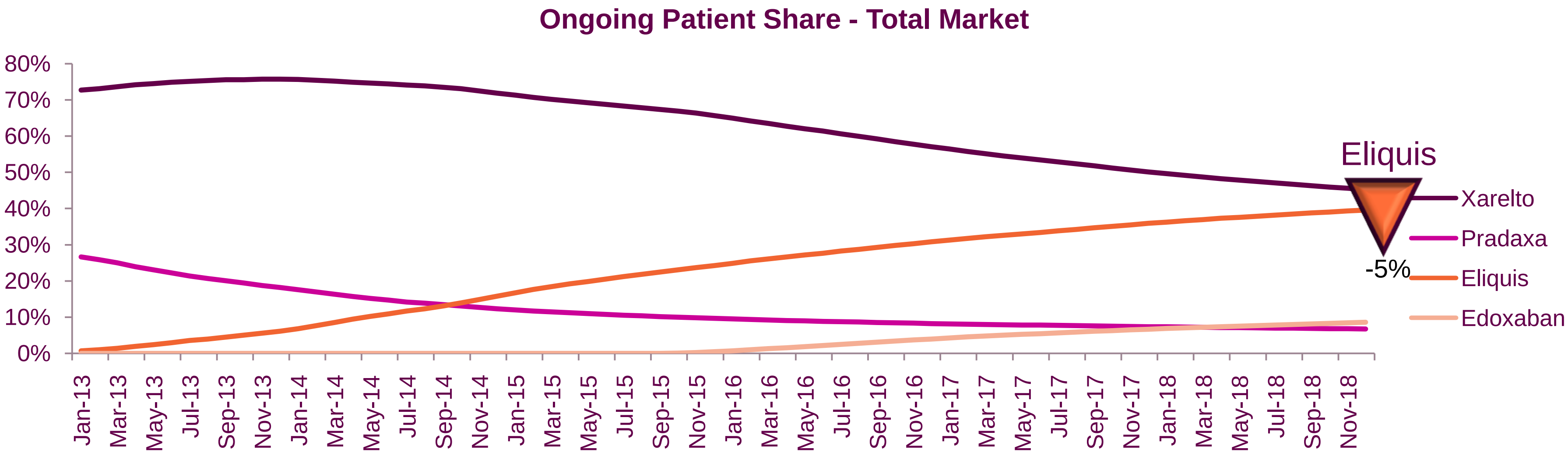
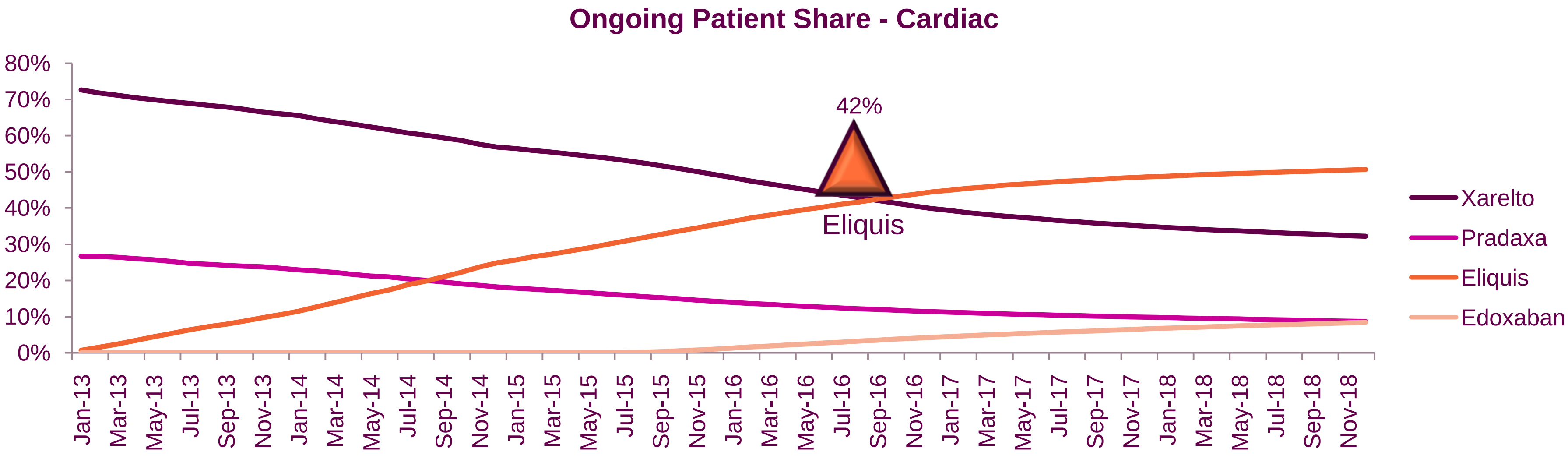
Eliquis Strugling to cross Forecasted Ongoing Patient Share of Xeralto in Dec 18.



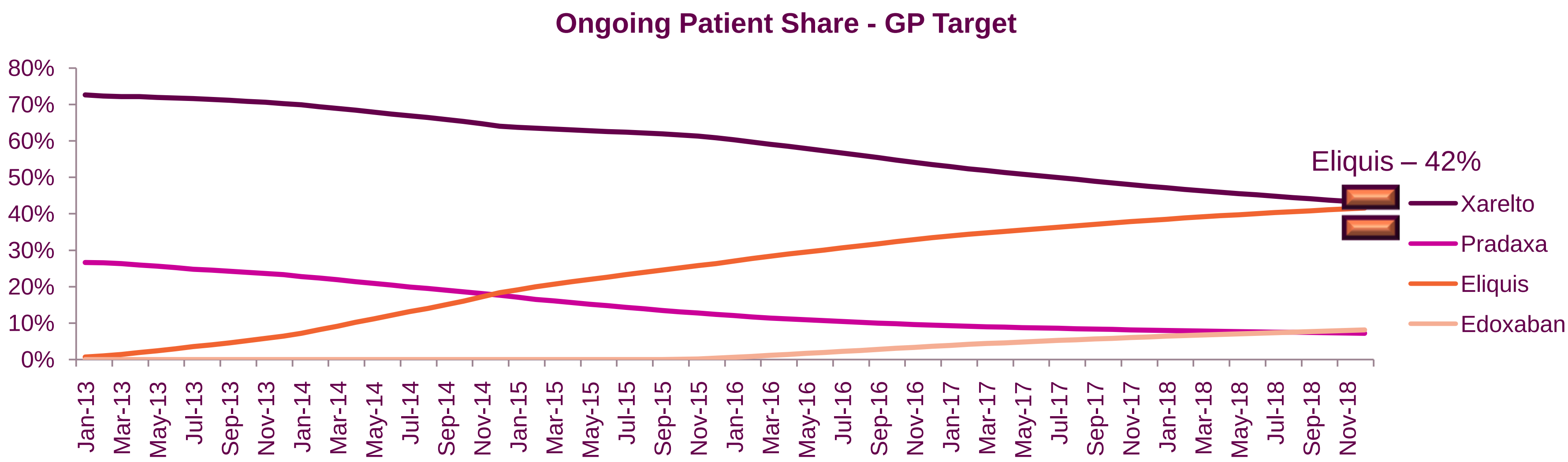
- Eliquis crossed Pradaxa at 14% in Oct-14
- After Dec-14 the Eliquis share is increasing in a linear fashion and reached 40% in Dec-18, which is 5 % less than the market leader; Xarelto.

Eliquis expected to become Market Leader in Sept 16 with 42% share.



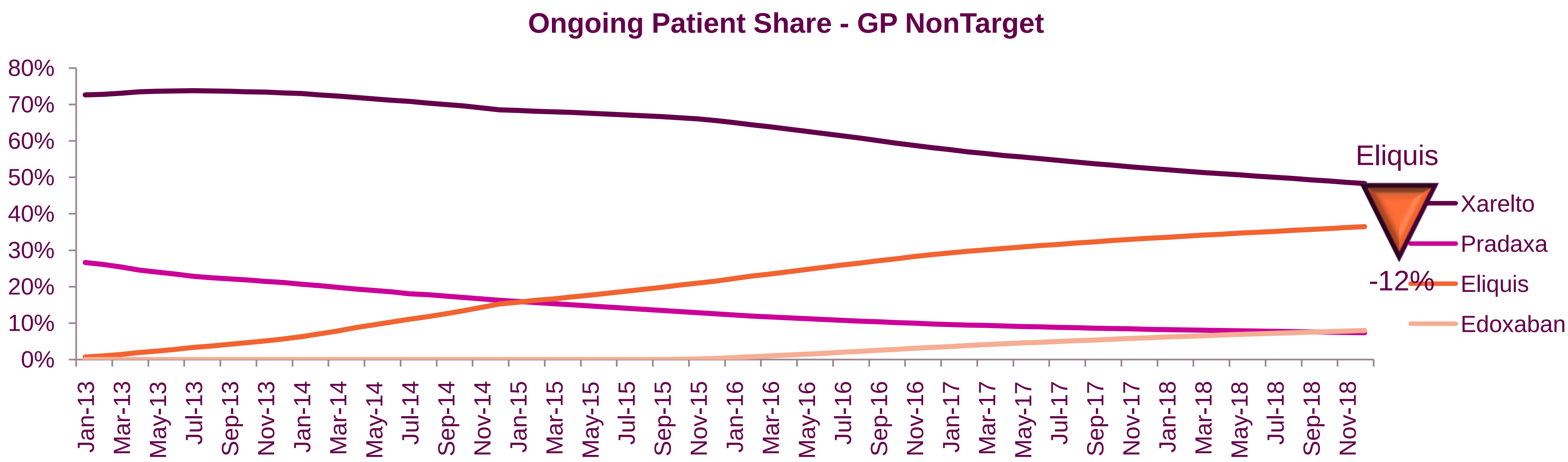
- Eliquis crossed Pradaxa with 21% share in sept 14.
- Eliquis expected to be market leader in sept 16 with 42% market share.

Eliquis expected to equalize the Ongoing Patient share with Xarelto in Dec18 in GP Target



- Eliquis crossed Pradaxa at 18% in Dec-14.
- Eliquis expected to reach 42% in Dec -18, equaling with the market leader; Xarelto.

Eliquis Struggling to cross Forecasted Ongoing Patient Share of Xeralto in Dec 18 - GP Non-Target



- Eliquis crossed Pradaxa at 16% in Feb-15 .
- Eliquis struggling to cross Xeralto with 36% share which 12% less as compare to Xeralto in Dec 18.

Eliquis is Expected to follow the same trend of Maximum Ongoing Patients in GP Target as compare to other segments.

Cardiac	2013	2014	2015	2016	2017	2018
Xarelto	25,978	35,592	39,923	37,263	33,725	31,224
Pradaxa	8,061	8,180	8,349	8,400	8,193	7,666
Eliquis	2,116	8,966	19,906	30,657	38,800	43,409
Edoxaban	0	0	196	2,541	5,329	7,369

GP Target	2013	2014	2015	2016	2017	2018
Xarelto	231,454	328,778	407,725	436,121	422,065	391,710
Pradaxa	68,763	66,427	64,464	62,810	61,180	58,226
Eliquis	10,794	54,306	131,823	206,894	274,207	326,733
Edoxaban	0	0	364	16,835	44,007	64,760

GP Non-Target	2013	2014	2015	2016	2017	2018
Xarelto	120,008	197,044	240,904	246,269	235,791	221,402
Pradaxa	32,808	35,628	34,718	32,858	31,512	29,755
Eliquis	4,823	24,387	57,919	93,086	124,340	146,821
Edoxaban	0	0	184	8,526	22,287	32,798

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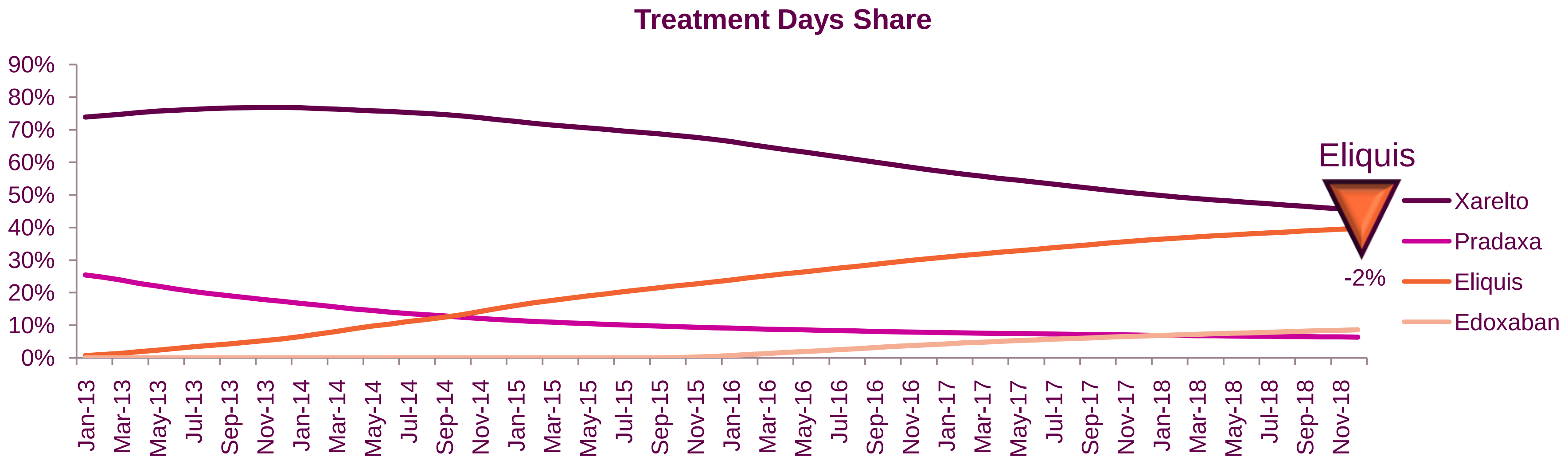
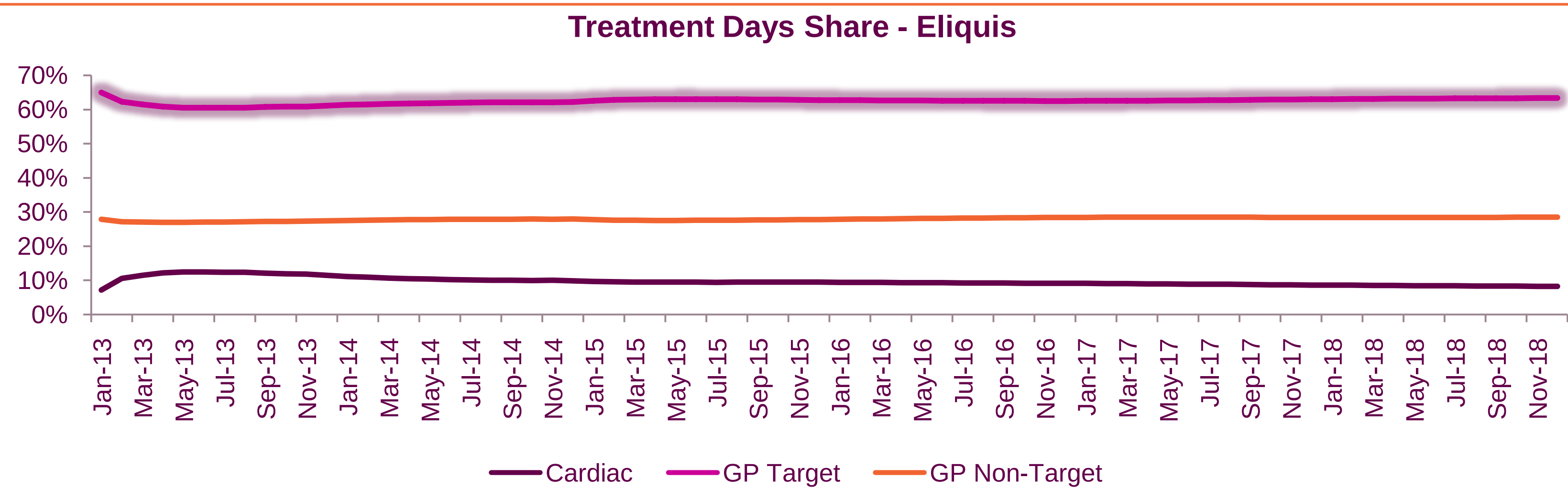
Eliquis is Struggling to become Market leader in Treatments Days with 3% less Share in Dec 18- Total Market



- Eliquis crossed Pradaxa at 12% in Sept-14.
- Eliquis struggling to cross Xeralto with 40% share which 5% less as compare to Xeralto in Dec 18.

Eliquis TD's Share in GP Target segment is maximum among all the segments.



- Eliquis TD's Share in GP Target segment is maximum which is 65% in Jan-13 and 63%in Dec 18 and between Jan-13 and Dec-18 share is fluctuating between range of 3%.
- Eliquis TD's Share in Cardiac segment is minimum which is 7% in Jan-13 and 8%in Dec 18 and between Jan-13 and Dec-18 share is fluctuating between range of 5%.
- Eliquis TD's Share in GP Non-Target segment is 28% in Jan-13 and 28 and is almost stable from 2013 till 2018

Eliquis is expected to have 38% of Treatment Days share for all the segments in Dec 2018.

Cardiac	2013	2014	2015	2016	2017	2018
Xarelto	7,585,635	10,392,893	11,657,395	10,880,880	9,847,773	9,117,387
Pradaxa	2,206,577	2,239,193	2,285,466	2,299,467	2,242,730	2,098,664
Eliquis	579,161	2,454,319	5,449,164	8,560,190	11,199,901	12,675,475
Edoxaban	0	0	57,363	741,836	1,556,094	2,151,709
GP Target	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Xarelto	67,584,560	96,003,281	119,055,725	127,347,225	123,242,869	114,379,328
Pradaxa	18,823,954	18,184,527	17,647,156	17,194,331	16,747,898	15,939,495
Eliquis	2,954,827	14,866,305	36,086,416	57,769,907	79,150,998	95,406,028
Edoxaban	0	0	106,313	4,915,924	12,850,091	18,909,818
GP Non-Target	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Xarelto	35,042,364	57,536,748	70,344,102	71,910,403	68,850,958	64,649,322
Pradaxa	8,981,185	9,753,095	9,504,158	8,994,945	8,626,467	8,145,342
Eliquis	1,320,326	6,675,846	15,855,302	25,991,864	35,891,155	42,871,779
Edoxaban	0	0	53,842	2,489,678	6,507,949	9,576,908
All Segments	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Xarelto	110,212,559	163,932,922	201,057,222	210,138,508	201,941,600	188,146,038
Pradaxa	30,011,716	30,176,815	29,436,779	28,488,742	27,617,096	26,183,501
Eliquis	4,854,314	23,996,470	57,390,882	92,321,962	126,242,054	150,953,282
Edoxaban	0	0	217,518	8,147,437	20,914,134	30,638,434
Total	**145,078,590**	**218,106,207**	**288,102,401**	**339,096,649**	**376,714,883**	**395,921,255**

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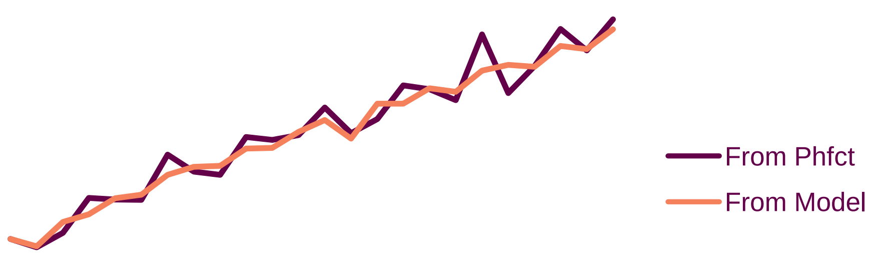
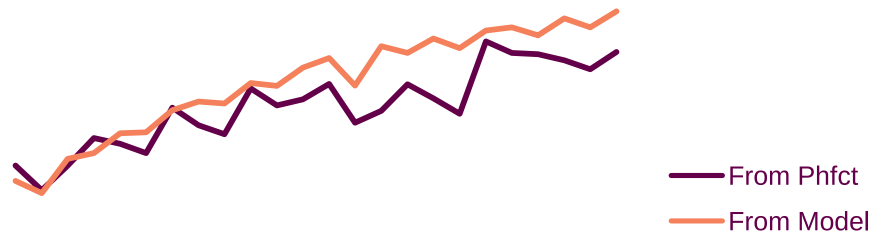
Market Validation of Treatment Days is done from Model with IMS Actual Data from Jan 13 till Dec 14.

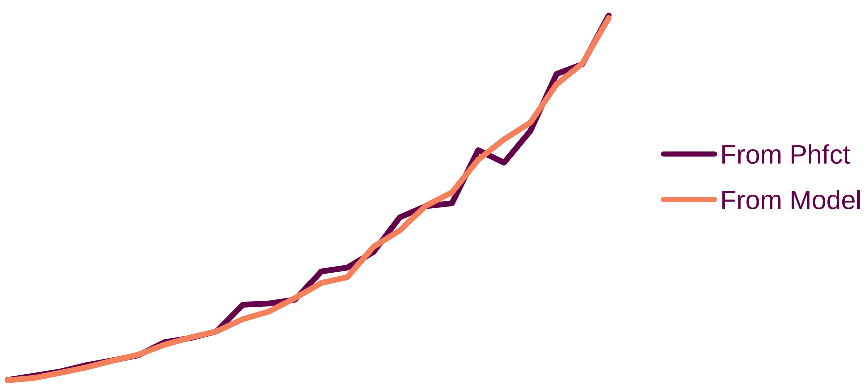
Treatment Days Comparison - Xarelto



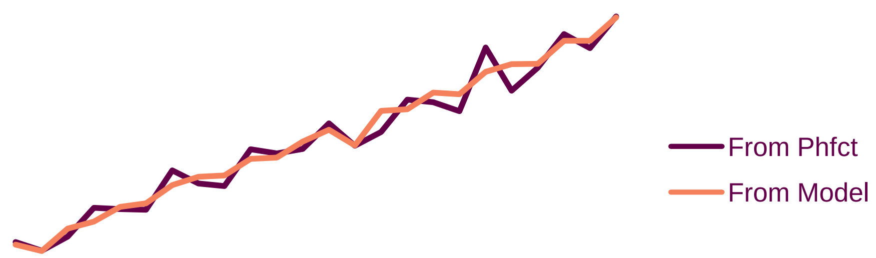
Treatment Days Comparison -Pradaxa



Treatment Days Comparison - Eliquis



Treatment Days Comparison - NOAC Total



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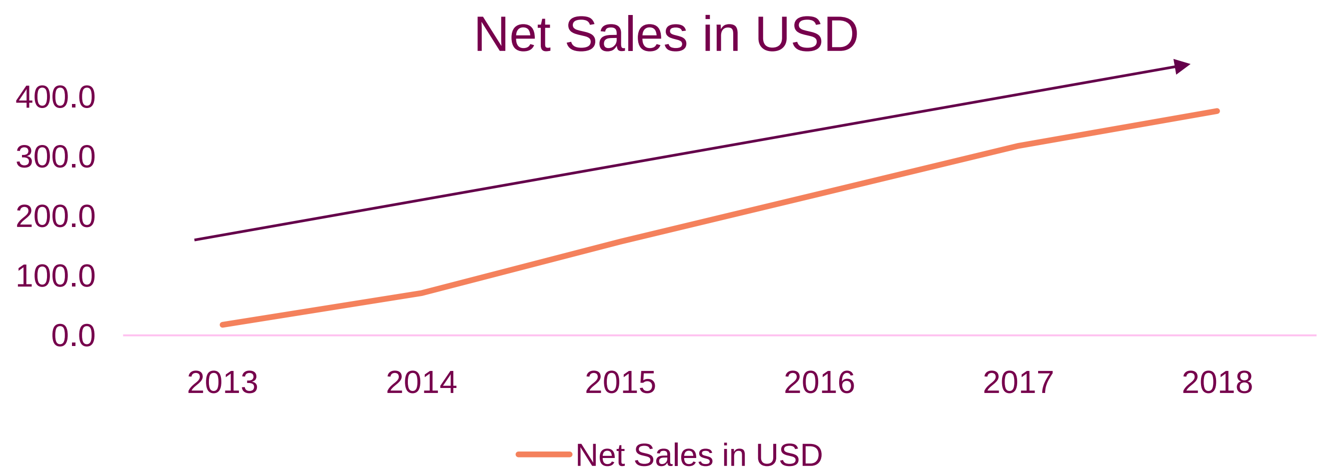
Eliquis revenues growth is expected to 80% CAGR by 2018 from 2013 whereas total market is growing by 23%CAGR.

NOAC Demand Sales (in Millions)	2013	2014	2015	2016	2017	2018
Xarelto	276	410	503	525	505	470
Pradaxa	75	75	74	71	69	65
Eliquis	21	75	159	243	332	397
Edoxaban	0	0	1	20	52	77
Total	**363**	**548**	**728**	**860**	**958**	**1,009**

Revenues;
Net Sales in 2015 is 156.8 M and in 2016 is 236.7 M

In Millions	2013	2014	2015	2016	2017	2018
Demand Sales in EUR	12.8	63.3	151.1	243.3	332.3	397.1
Gross Sales in EUR	14.8	69.6	158.5	251.8	339.1	401.4
Net Sales in USD	17.6	71.0	156.8	236.7	317.5	375.8



From 2013 Net sales from 17.6M is expected to grow by 375.8M in 2017 in linear fashion and in 2018 revenues are not growing as in earlier years because from 2018 market is stabilizing.

Findings

The number of NOAC patients from 2013-2018 are increasing by 8% CAGR and the Eliquis treatment days market share is expected to increase till 40% by Dec 18 from 0% in Jan 13 and revenues are expected to reach by $ 376 Million in Dec 18 from $18 Million in Jan 13 with CAGR of 80%.

Thank You