

391: Treatment patterns of goserelin 3.6 mg once monthly and 10.8 mg every three months in women with breast cancer: a real-world analysis

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Background:

- Breast cancer is one of the most commonly diagnosed cancers and a leading cause of death in women both in the US and worldwide.¹⁻³
- Goserelin, a subcutaneous implant, is a gonadotropin-releasing hormone (GnRH) agonist used for ovarian function suppression in combination with endocrine therapy in pre-menopausal women with hormone-receptor (HR)-positive breast cancers at high risk for relapse as well as in the palliative setting.⁴⁻⁶
- Goserelin may also be used in patients undergoing chemotherapy who wish to preserve ovarian function.⁷
- Goserelin is available in doses of 3.6 mg once monthly or 10.8 mg once every three months.
- In the US, only the 3.6 mg dose is approved for breast cancer;⁶ while both the 3.6 mg and 10.8 mg doses are approved in Canada and the UK.⁸⁻¹¹

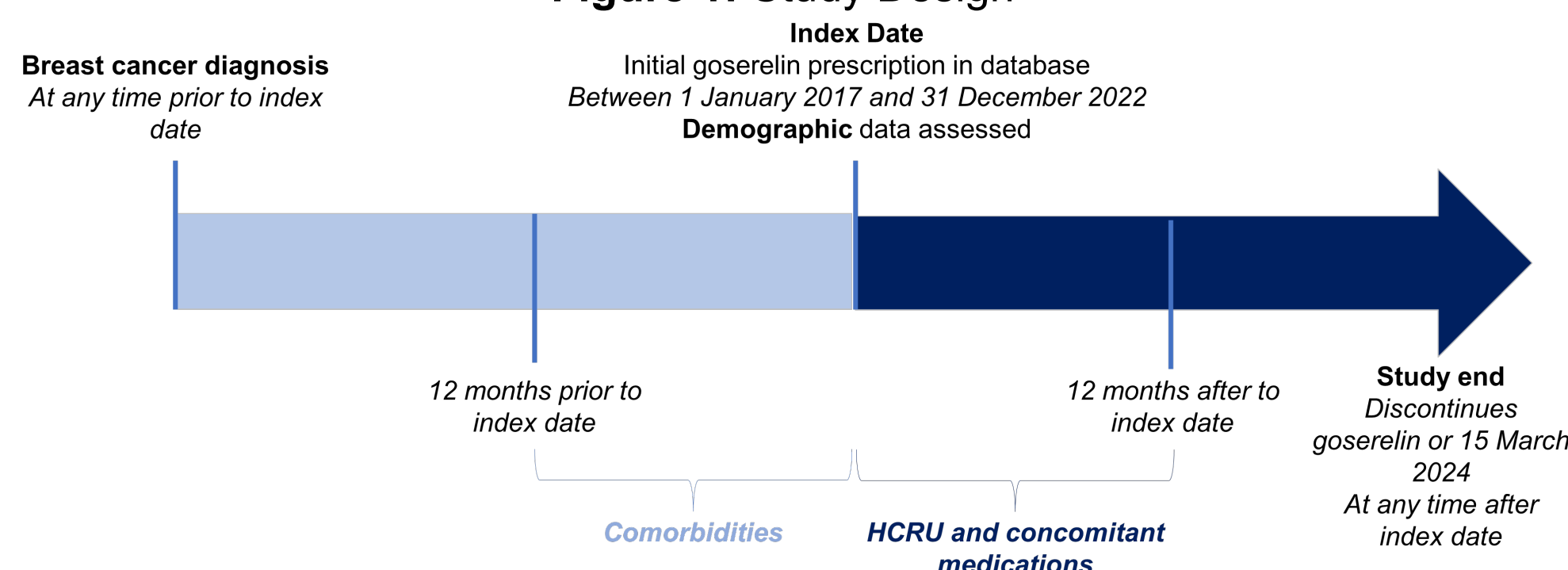
Objective:

- To demonstrate the characteristics of US patients with a history of breast cancer treated with either goserelin 3.6 mg or 10.8 mg and analyze goserelin treatment patterns using real-world evidence (RWE).

Methods:

- A retrospective, non-interventional real-world study (**Figure 1**) was performed using US electronic health record data through TriNetX, a global healthcare research network.
- Women (≥ 18 years of age) with a primary breast cancer diagnosis and ≥ 2 prescriptions of goserelin received after diagnosis and between 1 Jan 2017 – 31 Dec 2022 were included. Follow-up occurred until 15 Mar 2024.

Figure 1: Study Design



- Patients were stratified into the following cohorts:
 - patients only treated with goserelin 3.6 mg once monthly;
 - patients only treated with goserelin 10.8 mg once every 3 months;
 - patients who switched from goserelin 3.6 mg to goserelin 10.8 mg at any point during the follow-up period.
- Patient demographics, treatment duration, and treatment adherence were analyzed using descriptive analytics.
- Baseline patient characteristics were compared across cohorts using Chi-square tests for comparisons of categorical variables, t-tests for comparisons of continuous variables with $\alpha = 0.05$ as the threshold for statistical significance.
- Median time treated with each goserelin dosage was evaluated using Kaplan-Meier (KM) methods.

Treatment with goserelin 10.8 mg every three months is associated with greater adherence and longer treatment duration, compared with goserelin 3.6 mg monthly in US patients with breast cancer

Results:

- Across groups, mean age at index date was 42.2–44.4 years, patients were white (64.1–67.6%), black (11.8%–13.9%), Asian (8.0%–11.8%), and American Indian and/or Alaskan native (0.3%–2.9%) (**Table 1**).
- Peak utilization of goserelin 10.8 mg (36.6%) and dose switching (26.5%) occurred in 2020.
- The majority of patients that initiated treatment with goserelin 10.8 mg (75.6%) or who switched from goserelin 3.6 mg to 10.8 mg (79.4%) did so during or after 2020.
- Patients who switched from 3.6 mg to 10.8 mg had the longest median treatment duration (776 days) and highest adherence (75.3%-82.9%) of all dose groups (**Table 2**).
 - Patients treated with 3.6 mg had a median treatment duration of 264 days; 56.4% of these patients were treatment-adherent (**Table 2**).
 - Patients initially treated with 10.8 mg remained on treatment for a median of 429 days; 74.4% of these patients were treatment-adherent (**Table 2**).
- Patients who switched from 3.6 mg to 10.8 mg were more likely to remain on treatment longer, compared with patients treated with only goserelin 3.6 mg or 10.8 mg (**Figure 2**).
- Patient numbers in treatment analyses (**Table 2, Figure 2**) may differ from those for patient characteristics analyses (**Table 1**) due to additional information required for the treatment analyses.

Table 1. Patient characteristics by goserelin dosage group

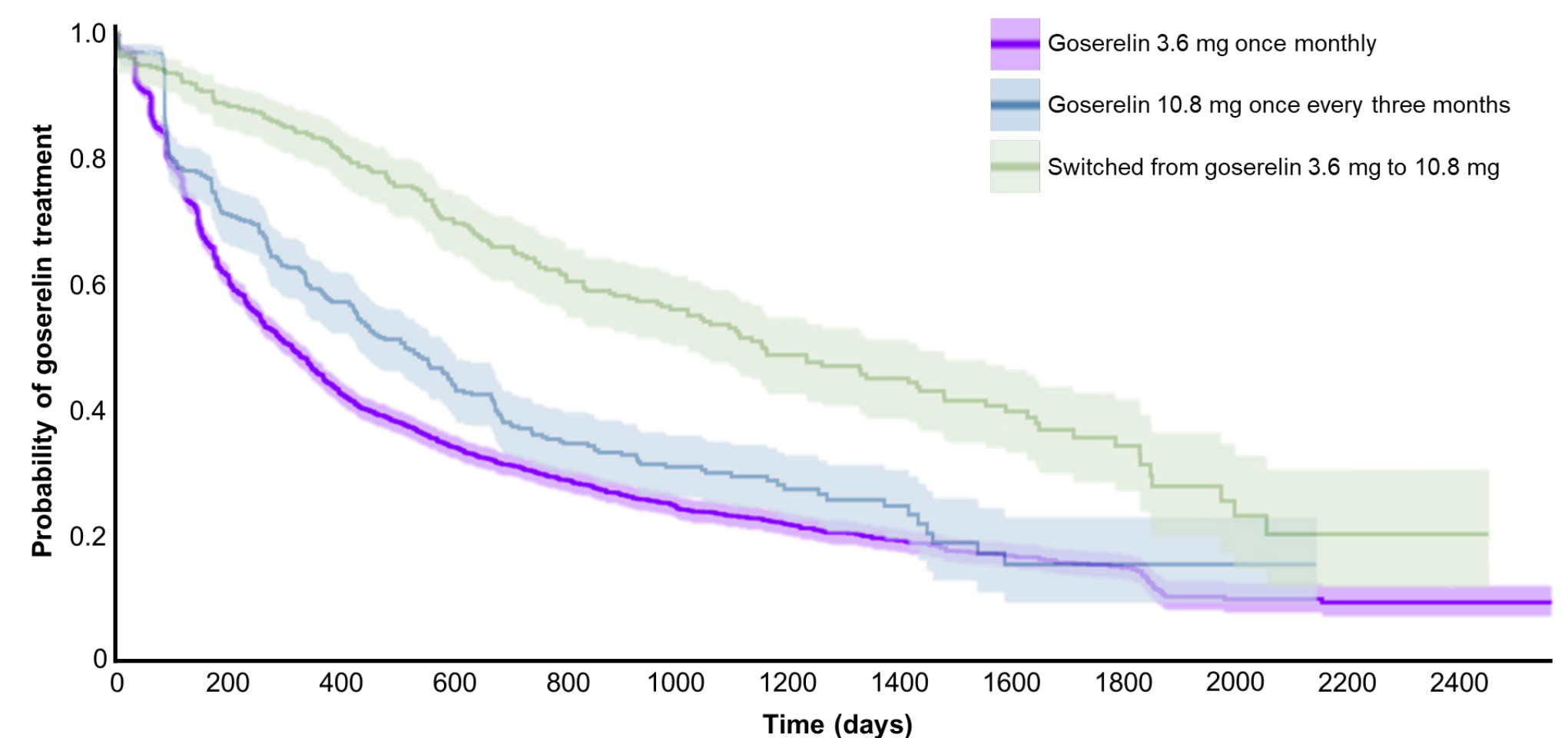
	Goserelin dosage					
	3.6 mg once monthly (n = 2,870)		10.8 mg once every 3 months (n = 410)		Switched from 3.6 mg to 10.8 mg (n = 340)	
	Mean	SD	Mean	SD	Mean	SD
Age						
Age at index, years	42.2	7.39	44.4	6.99	42.8	6.91
Current age, years	46.0	7.56	47.8	7.20	46.8	6.91
Race	n	%	n	%	n	%
White	1,840	64.1%	270	65.9%	230	67.6%
Black or African American	400	13.9%	50	12.2%	40	11.8%
Asian	230	8.0%	40	9.8%	40	11.8%
American Indian or Alaska Native	10	0.3%	10	2.4%	10	2.9%
Native Hawaiian or other Pacific Islanders	20	0.7%	10	2.4%	10	2.9%
Other	210	7.3%	40	9.8%	30	8.8%
Unknown	180	6.3%	30	7.3%	20	5.9%
Ethnicity	n	%	n	%	n	%
Hispanic or Latino	170	5.9%	30	7.3%	20	5.9%
Not Hispanic or Latino	1,980	69.0%	280	68.3%	230	67.7%
Unknown	730	25.4%	110	26.8%	90	26.5%

Table 2. Treatment patterns by goserelin dose group

Metric	Goserelin 3.6 mg (n = 2,849)	Goserelin 10.8 mg (n = 406)	Switched from goserelin 3.6 mg to 10.8 mg (n = 340)
Median duration of treatment (days)	264	429	776
Median time to switch (days)	-	-	218
Patients' adherent* to dosing schedule, n (%)	1,608 (56.4)	306 (74.4%)	256 (75.3) while on 3.6 mg 282 (82.9) while on 10.8 mg
Status as of March 15, 2024, n (%)			
Discontinued goserelin	2,018 (70.8)	261 (64.3)	173 (50.9)
Death	88 (3.1)	10 (2.5)	3 (0.9)
Treatment ongoing	743 (26.1)	135 (32.3)	164 (48.2)

*Defined as: ≤ 36 days between prescriptions (3.6 mg) or ≤ 108 days between prescriptions (10.8 mg)

Figure 2. KM curves show probability of remaining on treatment with goserelin 3.6 mg once monthly (purple, n=2,849), goserelin 10.8 mg once every three months (blue, n=406), and switching from goserelin 3.6 mg to 10.8 mg (green, n=340)



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