



**Pricing of Breast Cancer Drugs on Long Island:  
Breast Cancer Victims Face Discriminatory Prices**

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**Prepared for Rep. Carolyn McCarthy**

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U.S. House of Representatives**

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## EXECUTIVE SUMMARY

On Long Island, many women who have breast cancer must pay high prices for lifesaving prescription drugs. This report, which was prepared at the request of Rep. Carolyn McCarthy, investigates the cause of these high prices. It is the first report in the nation to analyze how price discrimination by drug manufacturers affects the cost of prescription drugs purchased by women with breast cancer.

Breast cancer is the most common form of cancer among women in the United States. This year, approximately 180,000 women will be diagnosed with breast cancer, and over 40,000 will die. Many of these women lack coverage for prescription drugs and face severe financial problems affording the medications that they need to survive. The high cost of breast cancer drugs has a special impact on Long Island women because women on Long Island suffer from breast cancer at rates that are among the highest in the nation.

This report investigates the pricing of five brand-name prescription drugs that are commonly prescribed to treat breast cancer. It compares the prices that Long Island women without prescription drug coverage must pay for these drugs with the prices that drug manufacturers charge favored customers, such as HMOs and the federal government. The report finds that:

- C **Price discrimination by drug manufacturers forces women on Long Island to pay inflated prices for breast cancer drugs.** Women on Long Island with breast cancer who pay for their own drugs must pay an average of 116% more for the five breast cancer drugs than the drug manufacturers' favored customers (Table 1). The drug with the highest price differential is Megace, manufactured by Bristol Myers-Squibb. Women on Long Island must pay 351% more than favored customers for a one-month supply of Megace. Women who buy Nolvadex, the most frequently prescribed breast cancer treatment, must pay 83% more than favored customers.

**Table 1: Women on Long Island Are Forced to Pay Higher Prices for Breast Cancer Drugs Than Favored Customers**

Drug	Manufacturer	Price for Favored Customers	Price for Long Island Breast Cancer Patients	Price Differential for Long Island Breast Cancer Patients	
		(One Month Supply)		Percent	Dollar
Megace (20 mg)	Bristol-Myers Squibb	\$39.60	\$178.72	351%	\$139.12
Nolvadex (10 mg)	AstraZeneca	\$58.00	\$105.87	83%	\$47.87
Arimidex (1 mg)	AstraZeneca	\$117.47	\$194.88	66%	\$77.41
Fareston (60 mg)	Schering-Plough	\$59.12	\$93.17	58%	\$34.05
Femara (2.5 mg)	Novartis	\$155.15	\$190.94	23%	\$35.79
<b>Average Price Differential</b>				<b>116%</b>	

- C **Price discrimination by drug manufacturers costs women on Long Island thousands of dollars.** In dollar terms, the impact of price discrimination by drug manufacturers can be enormous. Not only are breast cancer drugs expensive, they must often be used daily for long periods of time. The report finds that for a year of treatment, a woman on Long Island without drug coverage will pay almost \$1,700 more than a favored customer for the drug Megace and over \$900 more than a favored customer for Arimidex. Nolvadex is the most frequently prescribed breast cancer drug, with a typical course of treatment that lasts five years. Women on Long Island who purchase their own drugs must pay over \$2,800 more for Nolvadex than favored customers over this period.
- C **Drug manufacturers, not pharmacists, are primarily responsible for the high prices paid by women on Long Island.** Drug manufacturers have argued that the differences between the low prices paid by favored customers and the high prices paid by consumers without drug coverage can be attributed in large part to pharmacy markups. The report investigates this contention and finds that it is drug manufacturer pricing strategies -- not pharmacy or wholesale markups -- that primarily cause the price differentials observed in this report. For the five breast cancer drugs analyzed in this report, the average wholesale and pharmacy markup is only 19%. It is price discrimination at the manufacturer level that is the principal cause of the high drug prices paid by women on Long Island with breast cancer.

## I. BREAST CANCER INCIDENCE AND TREATMENT

Breast cancer is the most common form of cancer for women in the United States. In 2000, approximately 180,000 women in the United States will be diagnosed with breast cancer, and over 40,000 will die.<sup>1</sup> Over the course of a lifetime, one in eight women in the United States will be diagnosed with breast cancer.<sup>2</sup>

Women on Long Island are at particular risk for breast cancer. Long Island has one of the highest incidences of breast cancer in the United States. The breast cancer mortality rate on Long Island is over 20% higher than the national average.<sup>3</sup>

Initial therapy for breast cancer usually requires surgical removal of the tumor.<sup>4</sup> Additional prescription drug therapy (known as adjuvant therapy) is often recommended to prevent the growth and spread of cancer cells throughout the body. There are two types of drug therapy for breast cancer: chemotherapy and hormonal therapy. Chemotherapy drugs kill cancer cells directly. Hormonal drugs function by curtailing the production of or blocking the effects of estrogen, a natural hormone that can accelerate the growth of breast tumors.

The breast cancer drugs used in adjuvant therapy are expensive, especially the drugs used in hormonal therapies. Breast cancer patients spend over \$1 billion annually on prescription drugs used to treat the disease.<sup>5</sup> The costs are particularly high when patients are prescribed drugs in combination and directed to take the drugs over extended periods of time. Typical hormonal therapies are taken daily for up to five years.<sup>6</sup>

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<sup>1</sup>Cancer Journal for Clinicians, *Cancer Statistics, 2000* (Jan./Feb. 2000). This ranking excludes basal and squamous cell skin cancers and in situ carcinomas except urinary bladder. (Online at [http://www.ca-journal.org/articles...07-033/graphics/50\\_007-022\\_t01.gif](http://www.ca-journal.org/articles...07-033/graphics/50_007-022_t01.gif)).

<sup>2</sup>Katrina Armstrong, M.D., Andrea Eisen, M.D., and Barbara Weber, M.D., *Assessing the Risk of Breast Cancer*, *New England Journal of Medicine* (Feb. 24, 2000).

<sup>3</sup>National Cancer Institute, *The Long Island Breast Cancer Study Project* (1999) (online at <http://www-dccps.ims.nci.nih.gov/LIBSCP/Stats.html>).

<sup>4</sup>National Cancer Institute, *Cancer Facts: Therapy: Questions and Answers About Adjuvant Therapy for Breast Cancer* (1999) (online at <http://cancernet.nci.nih.gov>).

<sup>5</sup>Committee on Government Reform, Minority Staff, *Analysis of Sales of Prescription Drugs Used in Hormonal Treatment of Breast Cancer* (Oct. 1999).

<sup>6</sup>National Comprehensive Cancer Network and American Cancer Society, *Breast Cancer Treatment Guidelines for Patients* (1999) (online at [www.nccn.org](http://www.nccn.org)).

Many women with breast cancer do not have prescription drug coverage to pay their drug expenses. Overall, almost 60% of breast cancer patients are age 65 or over.<sup>7</sup> These women usually receive health insurance through Medicare, which does not pay for most prescription drugs. While some women on Medicare have supplemental drug coverage, their coverage is often inadequate.<sup>8</sup> Over 30% of women in the Medicare program -- approximately six million women -- have no prescription drug coverage of any kind.<sup>9</sup>

Women younger than 65 also often lack prescription drug coverage. The number of Americans without health insurance reached 44.3 million in 1998, a record high.<sup>10</sup> Nationwide, 15% of women younger than 65 -- over five million women -- have no health insurance coverage at all.<sup>11</sup> Some analysts have estimated that there are over 20,000 women younger than 65 in the United States who have breast cancer and are in need of financial assistance to pay for treatment.<sup>12</sup>

For women with breast cancer who must pay for their own prescription drugs, the costs can be staggering. Because of the high costs of treatment, many women with breast cancer are forced to delay diagnosis and treatment, or forego appropriate care.<sup>13</sup>

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<sup>7</sup>National Cancer Institute, *Estimated U.S. Cancer Prevalence Counts* (1999).

<sup>8</sup>Although Medicare beneficiaries can purchase supplemental "Medigap" insurance privately, these policies are often prohibitively expensive or inadequate. For example, one Medigap policy requires beneficiaries to meet a \$250 deductible, and then covers only 50% of the cost of prescription drugs, up to a maximum benefit of \$1,250. Health Affairs, *Prescription Drug Coverage, Utilization, and Spending Among Medicare Beneficiaries* (Jan./Feb. 1999). The best supplemental prescription drug coverage is available to those who have private sector, employer-based coverage. But only 24% of Medicare beneficiaries have this type of prescription drug coverage. National Economic Council, Domestic Policy Council, *Disturbing Truths and Dangerous Trends: The Facts About Medicare Beneficiaries and Prescription Drug Coverage* (July 22, 1999).

<sup>9</sup>HCFA, Unpublished Medicare Current Beneficiary Survey Data Provided Upon Request to Rep. Henry A. Waxman (Oct. 1999).

<sup>10</sup>U.S. Census Bureau, *Current Population Reports: Health Insurance Coverage* (Oct. 1999).

<sup>11</sup>*Id.*

<sup>12</sup>Testimony of Susan Braun, President and CEO, Susan G. Komen Breast Cancer Foundation, before the House Subcommittee on Health and the Environment (July 21, 1999).

<sup>13</sup>See Testimony of Dr. Stanley Klausner, Director of Breast Services, Brookhaven Memorial Hospital, and Fran Visco, President, National Breast Cancer Coalition, before the House

## II. OBJECTIVE OF THE REPORT

Rep. McCarthy asked the minority staff of the Government Reform Committee to investigate the high drug prices faced by women with breast cancer on Long Island who lack prescription drug coverage. In particular, she requested that the staff examine whether drug manufacturers have adopted pricing strategies that force women with breast cancer who lack drug coverage to pay higher prices for breast cancer drugs than other purchasers.

Several studies have found that drug manufacturers engage in price discrimination, charging low prices for drugs used by favored customers, such as HMOs or the federal government, and higher prices for drugs used by individual consumers who must pay for their own drugs. For example, in 1998 the Congressional Budget Office conducted a detailed examination of prescription drug pricing and concluded that:

Different buyers pay different prices for brand-name prescription drugs. . . . In today's market for outpatient drugs, purchasers that have no insurance coverage for drugs . . . pay the highest prices for brand name drugs.<sup>14</sup>

This report is the first report in the nation to investigate whether the drug manufacturers who make breast cancer drugs engage in this form of price discrimination. It is also the first report in the nation to attempt to quantify the extent of price discrimination for breast cancer drugs.<sup>15</sup>

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Subcommittee on Health and the Environment (July 21, 1999).

<sup>14</sup>Congressional Budget Office, *How Increased Competition from Generic Drugs Has Affected Prices and Returns in the Pharmaceutical Industry*, xi (July 1998).

<sup>15</sup>Rep. Bernard Sanders has investigated the pricing of one breast cancer drug, Nolvadex, in the United States and Canada. His investigation found that this drug was many times more expensive in the United States than in Canada. See Rep. Bernard Sanders, *The High Cost of Prescription Drugs* (1999) (online at [www.house.gov/bernie/legislation/pharmbill/montreal.html](http://www.house.gov/bernie/legislation/pharmbill/montreal.html)).

### III. METHODOLOGY

#### A. Selection of Drugs

This report focuses on the five brand-name drugs that are approved by the Food and Drug Administration (FDA).<sup>16</sup> All five drugs are out-patient hormonal treatments for breast cancer.<sup>17</sup> These drugs are:

- C Nolvadex, a hormone therapy manufactured by AstraZeneca. Nolvadex, which contains the active ingredient tamoxifen, is the most frequently prescribed breast cancer medicine in the United States and is used to treat early and advanced breast cancer in pre- and post-menopausal women. The drug is also the only drug approved by FDA as a treatment to reduce the risk of breast cancer in women at high risk of developing the disease. Total sales of Nolvadex in 1998 were \$523.7 million.<sup>18</sup>
  
- C Femara, a hormone therapy manufactured by Novartis. Femara is a second-line therapy usually used to treat advanced breast cancer when treatment with Nolvadex has failed. Total sales of Femara in 1998 were over \$150 million.<sup>19</sup>

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<sup>16</sup>The report focuses on brand-name drugs because manufacturers of brand-name drugs generally have greater control over drug pricing than manufacturers of less expensive generic drugs. Consumers who purchase drugs in their generic versions sometimes pay less than those who purchase the brand-name version, although the Congressional Budget Office has found that the availability of a generic drug often does not decrease the cost of the brand-name product. See *How Increased Competition from Generic Drugs Has Affected Prices and Returns in the Pharmaceutical Industry*, *supra* note 14. Among the drugs included in this study, one drug (Megace) is available in a generic version, and a second drug (Nolvadex) is available as a licensed generic through a patent claim settlement that gave one generic manufacturer the exclusive rights to distribute the generic version.

<sup>17</sup>This study does not include oral chemotherapy drugs that are used to treat breast cancer. These drugs are generally taken for a short period of time (six months or less). Moreover, because they are chemotherapy drugs, they fall into the narrow class of drugs that are covered by Medicare. Other breast cancer drugs, such as Taxol, are not included in this analysis because they are generally dispensed in a hospital setting, not via out-patient prescription.

<sup>18</sup>Zeneca, *Annual Report and Accounts and Form 20-F 1998* (1999) (available online at <http://annualrep.zeneca.com/7.htm>).

<sup>19</sup>Forbes, *A New Career for Dr. Vasella* (Feb. 9, 1998).



- C Arimidex, a hormone therapy manufactured by AstraZeneca. Arimidex is another second-line therapy usually used to treat advanced breast cancer when treatment with Nolvadex has failed. Total sales of Arimidex in 1998 were \$121 million.<sup>20</sup>
- C Megace, a hormone therapy manufactured by Bristol-Myers Squibb. Megace is generally a third-line therapy used to treat advanced breast cancer when treatment with Nolvadex and Arimidex has failed. Total sales of Megace in 1998 were \$121.9 million.<sup>21</sup>
- C Fareston, sold in the United States by Schering-Plough. Fareston is a first- or second-line treatment for advanced breast cancer. Total sales in 1998 were approximately \$17.4 million.<sup>22</sup>

**B. Determination of Prices for Women on Long Island**

In order to determine the prices that women without drug coverage are paying for these breast cancer drugs on Long Island, the staff of Rep. McCarthy's office conducted a survey of nine drug stores -- including both independent and chain stores -- in Rep. McCarthy's district. Rep. McCarthy represents the 4th Congressional District in New York, which is located on Long Island and includes the towns of Freeport, Hempstead, and Mineola. Average drug prices on Long Island were estimated by averaging the prices obtained from these drug stores.

**C. Determination of Prices for Favored Customers**

Drug pricing is complicated and drug companies closely guard their pricing strategies. In order to determine the prices that drug manufacturers charge their most favored customers, the minority staff used the prices on the Federal Supply Schedule (FSS). FSS prices are the prices at which many federal agencies can purchase drugs. They are negotiated by the federal government and the drug manufacturers.

According to the U.S. General Accounting Office (GAO), an investigative arm of Congress, "[u]nder GSA procurement regulations, VA [Department of Veterans Affairs] contract officers are required to seek an FSS price that represents the same discount off a drug's list price that the

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<sup>20</sup>Annual Report and Accounts and Form 20-F 1998, *supra* note 18.

<sup>21</sup>Bristol-Myers Squibb, *Products over \$100 Million in 1998* (1999) (available online at <http://www.shareholder.com/bmy/financials.cfm>).

<sup>22</sup>Orion Group, *Orion Group Annual Report 1998* (1999) (available online at <http://www.orion.fi/ewww/index.html>).

manufacturer offers its most-favored nonfederal customer under comparable terms and conditions.’<sup>23</sup> As a result, according to GAO, “federal supply schedule prices represent the best publicly available information on the prices that pharmaceutical companies charge their most favored customers.”<sup>24</sup>

#### **D. Determination of Drug Markups**

In order to assess whether the differences between the prices paid by women on Long Island and the prices paid by favored customers could be attributed to post-manufacturer markups, this report examined the markups charged by drug wholesalers and pharmacists. To determine these markups, the Wholesale Acquisition Cost (WAC) was obtained for the five drugs analyzed in this report. These WAC prices are the average prices at which drug manufacturers sell the drugs to wholesalers, who then resell them to pharmacists for retail distribution. The WAC prices were compared to the average retail prices for the drugs on Long Island. The difference between the WAC prices and the retail prices for the drugs represents the post-manufacturer markup of wholesalers and pharmacists.

#### **E. Selection of Drug Dosage**

Prices were obtained for a monthly supply of each of the drugs. Fareston, Arimidex, and Femara are generally taken once daily, and 30 tablets represent a monthly dose of these drugs. Nolvadex is generally taken twice daily, and 60 tablets represent a monthly dose for most women with breast cancer. Eight Megace tablets are taken daily, and 240 tablets represent a monthly dose of this drug.

### **IV. FINDINGS**

#### **A. Breast Cancer Drugs Are More Expensive for Women on Long Island than for Favored Customers**

The breast cancer drugs investigated in this study are substantially more expensive for women on Long Island than for favored customers such as HMOs and the federal government. For the five hormonal therapies for breast cancer, Long Island women without prescription drug coverage must pay, on average, 116% more than the drug manufacturers’ favored customers for a one month supply (Table 1). This means that, on average, the prices paid by women on Long Island are more than twice the prices paid by favored customers.

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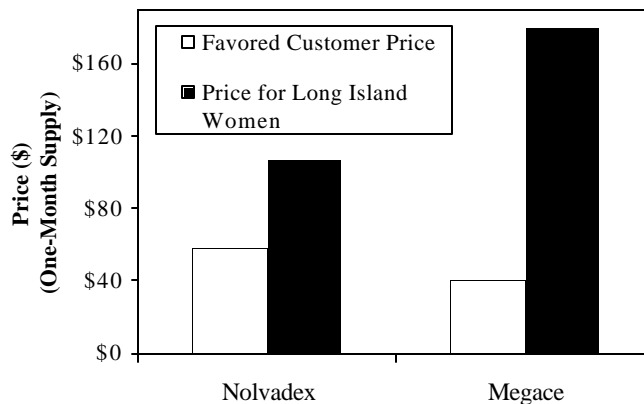
<sup>23</sup>U.S. General Accounting Office, *Drug Prices: Effects of Opening Federal Supply Schedule for Pharmaceuticals Are Uncertain*, 6 (June 1997).

<sup>24</sup>Letter from William J. Scanlon, Director, GAO Health Financing and Public Health Section (April 21, 1999).

All five drugs are more expensive for women with breast cancer on Long Island who lack drug coverage than they are for drug manufacturers' favored customers. The drug with the highest percentage price differential is Megace, the hormone treatment manufactured by Bristol Myers-Squibb. Favored customers pay only \$39.60 for a one month supply of Megace, while women on Long Island who lack prescription drug coverage must pay \$178.72 -- over four times as much. Nolvadex, the hormone treatment manufactured by AstraZeneca, contains tamoxifen and is the most frequently prescribed breast cancer drug in the United States. It costs women on Long Island with breast cancer 83% more to purchase this drug than the manufacturer's favored customers (Figure 1).

Overall, four of the five drugs have price differentials of at least 50%. Femara, manufactured by Novartis, has the lowest price differential, 23%.

**Figure 1: Women on Long Island Pay Higher Prices for Breast Cancer Drugs than Favored Customers**



**B. Price Differentials Are Substantial in Dollar Terms**

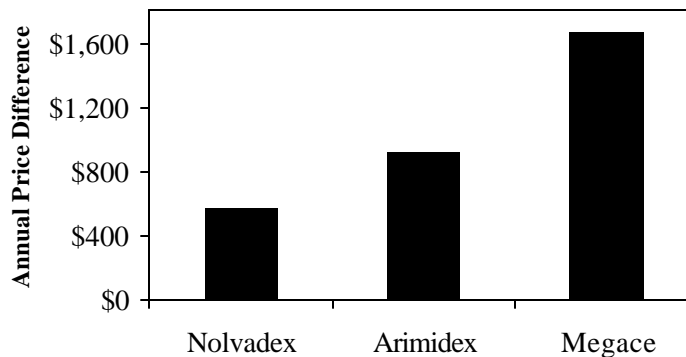
These price differences translate into large sums in dollar terms. A patient who is diagnosed with breast cancer and undergoes therapy involving prescription drugs will typically take hormonal therapies daily for up to five years. Over the course of treatment, a woman on Long Island with breast cancer could be forced to pay thousands of dollars more for these drugs than the drug manufacturers' favored customers.

Nolvadex, the most frequently prescribed breast cancer drug, is generally prescribed as the first-line hormonal therapy for breast cancer treatment. A monthly prescription for Nolvadex costs an uninsured woman on Long Island almost \$50.00 per month more than a favored customer. On an annual basis, this represents a price difference of over \$550. For a full five year course of treatment, an uninsured breast cancer patient on Long Island would spend over \$6,300 on the drug -- over \$2,800

more than a favored customer.

Some women who initially begin taking Nolvadex have a recurrence of the disease, and switch to second-line therapies such as Arimidex. For these women, the price differences can be even larger. Arimidex is sold by AstraZeneca and is used to treat advanced stage breast cancer. A woman with breast cancer on Long Island without prescription drug coverage pays over \$75 more than a favored customer for a monthly prescription of Arimidex. For one year of treatment, a breast cancer patient on Long Island would pay \$2,338 for Arimidex, compared to \$1,410 for a favored customer. This is a price difference of over \$900. Megace has the highest price difference in dollars. A breast cancer patient on Long Island who pays for her own drugs would pay \$1,670 more than a favored customer for a one year supply of Megace (Figure 2).

**Figure 2: Women on Long Island Pay Hundreds of Dollars More Per Year for Breast Cancer Drugs than Drug Manufacturers' Favored Customers**



**C. Price Discrimination by Drug Manufacturers Is the Primary Cause of the Price Differentials**

Drug manufacturers have argued that it is misleading to compare prices paid by individual consumers with what they describe as “wholesale level” prices paid by favored customers such as HMOs and the federal government. According to the manufacturers, the differential between these two prices is often largely explained by the markups charged by pharmacies.

This report assessed this contention by comparing the Wholesale Acquisition Cost for the five drugs, which is the average price that drug manufacturers charge drug wholesalers, with the average retail price on Long Island for the drugs. This comparison showed that the combined wholesale and pharmacy markup for these breast cancer drugs is only 19% on average. This markup can explain less than one third of the difference between the prices paid by breast cancer patients on

Long Island and the prices paid by favored customers.

The drug manufacturers have also suggested that lower prices paid by favored customers are simply due to volume discounts given to those who purchase large amounts of pharmaceuticals. The findings in this analysis indicate that this does not account for the observed price differentials. Drug wholesalers, which purchase drugs for resale to pharmacies, purchase drugs in large volumes. But the wholesale acquisition cost (WAC) at which drug wholesalers are able to buy the five breast cancer drugs examined in this report are 80% higher than the prices for favored customers.

These findings indicate that the high prices for breast cancer drugs on Long Island are attributable primarily to manufacturer-level price discrimination. The drug manufacturers charge low prices for these drugs when they are sold to favored customers, such as HMOs and the federal government, but substantially higher prices when the drugs are intended for use by women with breast cancer who lack prescription drug coverage. The consequence of this price discrimination is that the women with breast cancer who can least afford high drug costs, such as women on Medicare and uninsured younger women, are forced to pay the most for the drugs that they need to survive.