



## Is There a Role for Bazedoxifene (BZA) in Breast Cancer Care?

*“My philosophy and goal in the treatment for my patients with breast cancer is focused towards:*

***“Not just treating cancer—but treating the whole patient.”***

Balancing:

- Cancer Control
- Long-Term Health
- Quality of Life “QoL”

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### A Real-World Example of a typical case:

- A 63-year-old woman is diagnosed with a **small (10 mm), low-grade invasive ductal carcinoma of the breast** that is:
  - Hormone receptor positive (ER/PR+)
  - HER2 negative
  - No lymph node involvement
  - Completely removed with surgery (margins cleared)
- This is considered a **low-risk, early-stage breast cancer**.

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### What Is the Prognosis for This Type of Cancer?

The **good news**: Outcomes are excellent in patients like this:

- 5-year recurrence risk: ~5–8% (with hormone therapy)
- Risk of spread (metastasis): ~2–4%
- Long-term survival: over 90–95%

**Low risk of recurrence** due to several favorable features:

- Small tumor size
  - Low grade (slow growing)
  - No lymph node involvement
  - Strong hormone sensitivity
  - Clean surgical margins
  - These cancers tend to behave in a **less aggressive, more predictable way**.
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## 'Standard of Care' Treatment Today

After surgery, most patients are advised to receive:

- **Radiation therapy** (to reduce local recurrence) and
- **Hormone-blocking therapy** (usually tamoxifen or similar drugs for 5–10 years)
- Important point: Hormone-blocking therapy treatments work by reducing or blocking estrogen receptors in the breast, because estrogen can potentially fuel these cancers.

### The Trade-Off: *Estrogen Suppression*

While effective, long-term estrogen suppression can lead to:

- Hot flashes
- Bone loss (osteoporosis)
- Mood and cognitive changes
- Reduced quality of life in some women

This raises an important question:

*"Is there a better balance between cancer control and quality of life (QoL)?"*

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## What Is Bazedoxifene (BZA)?

Bazedoxifene is a medication originally approved for **osteoporosis** in Europe and Japan. It belongs to a class called **SERMs** (Selective Estrogen Receptor Modulators).

### What makes this drug interesting?

It behaves differently in different tissues in the body:

- **Blocks estrogen in breast tissue** (good for cancer)
  - **Supports bone health** (like estrogen)
  - **Does not stimulate the uterus** (safer than some alternatives)
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## How Is BZA Different From Tamoxifen?

<u>Feature</u>	<u>Tamoxifen</u>	<u>Bazedoxifene</u>
Action	Blocks estrogen receptor	Destroys/degrades receptor
Resistance	Can develop	May work even if resistance occurs
Uterus	Can stimulate growth	Protective
Metabolism	May worsen lipids	Often improves lipid profile

👉 BZA may act more like a newer class of drugs called **SERDs**, which remove the estrogen receptor entirely rather than just blocking it.

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## What Have Laboratory Studies Shown?

In lab and animal studies:

- BZA stops growth of breast cancer cells
- Works even in tamoxifen-resistant cancers
- Effective against mutated estrogen receptors
- May reduce the chance of resistance developing

Key advantage: it may work when standard therapies fail.

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## What About Human Studies?

### 1. Treatment of Advanced Breast Cancer

BZA has been studied with drugs like **palbociclib**

Goal: overcome resistance in metastatic disease

### 2. Prevention and Early Disease (*PROMISE Study*)

Combination of **BZA + estrogen (DuaVee)** used in women with early changes (DCIS)

Findings:

- Reduced cancer cell growth markers (Ki-67)
- Improved symptoms (fewer hot flashes)
- Maintained QoL (quality of life)

### 3. Additional Benefits

May reduce **breast density** (a cancer risk marker)

May improve **cholesterol and metabolic health**

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## A New Concept: “Tissue-Selective Estrogen Complex”

BZA is part of a newer strategy: **Protect some tissues while blocking others**

When combined with estrogen:

- *Estrogen* helps symptoms (bones, brain, hot flashes)
- *BZA* blocks harmful effects in breast and uterus

This combination is called a **Tissue Selective Estrogen Complex (TSEC)**.

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## What Does This Mean for Patients?

### Current reality:

- Standard therapy (tamoxifen, etc.) is **proven and effective**
- It remains the **recommended approach today**

### Emerging Concept:

Bazedoxifene may offer:

- Effective and improved cancer control compared to tamoxifen
- Definite better quality of life
- Potential benefit in resistant disease
- A more balanced hormonal approach

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## Key Takeaways

- Early-stage, hormone-positive breast cancer often has an **excellent prognosis**
  - Standard therapy focuses on **blocking estrogen**
  - Bazedoxifene is a **promising alternative approach**
  - Bazedoxifene is **ONLY** available in the U.S. in combination with estrogen (**DuaVee**)
  - **It may:**
    - Work differently (and possibly better in some cases)
    - Reduce side effects
    - Preserve quality of life
  - However, it is still **being studied** and is not yet 'standard of care' replacement for current adjunct hormonal therapies.
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## Bottom Line

- This is an evolving area of medicine.
- The goal is shifting toward:
  - “**Not just treating cancer—but treating the whole patient.**”
- Balancing:
  - Cancer control
  - Long-term health
  - Quality of life

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## Understanding Your Options

<b>Category</b>	<b>Traditional Therapy (Tamoxifen)</b>	<b>Bazedoxifene (BZA)</b>
<b>How it works</b>	Blocks estrogen receptor	Removes/degrades receptor
<b>Effect on cancer</b>	Proven effective	Promising, under study
<b>Resistance over time</b>	Can develop	May overcome resistance
<b>Hot flashes</b>	Common	Less (combination therapy)
<b>Bone health</b>	Can worsen	Supports bone density
<b>Uterine effects</b>	Can stimulate lining	Neutral or protective
<b>Cholesterol/metabolism</b>	May worsen	Often improves
<b>Current status</b>	Standard of care	Emerging option

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### Simple Takeaway

- **Tamoxifen:** Proven, beneficial, widely used as standard of care
  - **Bazedoxifene:** Newer, promising, not standard of care, worthy of consideration
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References available on request.

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