Premise: Pt has a big tumor but cannot accept mastectomy, discuss neoadjuvant chemotherapy- risks and benefits and agreeable for trial of nact before mastectomy

### **Patient Scenario**

**Dr. Tan:** Good morning, Ms. Chua. Thank you for coming in today. I understand that you’ve been thinking a lot about your treatment options. How are you feeling?

**Ms. Chua:** Good morning, Dr. Tan. I’m very worried. I know my tumor is big, but I just cannot accept the idea of losing my breast. I don’t want a mastectomy if there’s any way to avoid it.

**Dr. Tan:** I understand how difficult this decision can be. Since your tumor is large, a mastectomy is typically the recommended approach. However, in some cases, we can try neoadjuvant chemotherapy (NACT) first. This means giving chemotherapy before surgery to shrink the tumor, potentially allowing for breast-conserving surgery instead of a mastectomy.

**Ms. Chua:** Really? So there’s a chance I might not need a mastectomy if the tumor shrinks enough?

**Dr. Tan:** Yes, that’s possible. NACT can reduce the tumor size, and if the response is good, we may be able to proceed with a lumpectomy instead of a mastectomy. However, the response to chemotherapy varies between patients. If the tumor does not shrink enough, we may still need to do a mastectomy.

**Ms. Chua:** I see. What are the risks of trying chemotherapy first?

**Dr. Tan:** The main risks are the side effects of chemotherapy, which include nausea, hair loss, fatigue, and a weakened immune system. There’s also a chance that the tumor may not respond well enough, meaning you may still need a mastectomy later. However, the benefit is that if the tumor does respond, you may be able to keep your breast.

**Ms. Chua:** I really want to try. If there’s even a chance I can avoid mastectomy, I think I should go for it.

**Dr. Tan:** That’s a reasonable approach. We will monitor your tumor’s response closely with imaging and reassess after a few cycles of chemotherapy. If the tumor shrinks adequately, we can plan for breast-conserving surgery. If not, we will discuss the next steps together.

**Ms. Chua:** Okay, I’m willing to try. Thank you for explaining everything to me.

### **Decisional Tool: Pros and Cons of Each Modality**

#### **Neoadjuvant Chemotherapy (NACT) + Lumpectomy Attempt**

✅ **Pros:**

* **Possibility of Breast Conservation:** If the tumor responds well, a lumpectomy may be possible instead of a mastectomy.
* **Early Treatment of Systemic Disease:** Chemotherapy addresses potential micrometastases early.
* **Allows for Tumor Response Monitoring:** Helps assess how the tumor behaves before surgery.

❌ **Cons:**

* **Risk of Incomplete Response:** If the tumor does not shrink enough, mastectomy may still be required.
* **Chemotherapy Side Effects:** Includes nausea, fatigue, hair loss, and a weakened immune system.
* **Longer Treatment Timeline:** Surgery is delayed while undergoing chemotherapy.

#### **Mastectomy Without Neoadjuvant Chemotherapy**

✅ **Pros:**

* **Definitive Tumor Removal:** Removes the entire breast, eliminating the tumor completely.
* **Avoids Chemotherapy Side Effects (Initially):** Some patients may not need chemotherapy upfront.
* **Shorter Time to Surgery:** No waiting period for chemotherapy response before proceeding with surgery.

❌ **Cons:**

* **Loss of the Breast:** Can have a significant emotional and psychological impact.
* **No Chance for Breast Conservation:** Even if the tumor could have shrunk, mastectomy is the only option without NACT.
* **Potential Need for Post-Surgical Chemotherapy:** If lymph nodes are involved, chemotherapy may still be needed after surgery.