

Interventional Cancer Pain: Pain Control WITH Preserved Mental Clarity

Special guest:
Cheryl

Ann Cai Shah, MD

Director, Cancer Pain Services

UCSF Dept of Anesthesia & Perioperative Care



Cancer Pain

- >2 million people are diagnosed with cancer every year
 - >600,000 cancer deaths per year
 - 5-year relative survival: **69.2%**
- ***Up to 90% of patients with advanced cancer have pain that significantly impacts function, mood, and sleep***



SEER database, 2024

Naleschinski D, et al. Pain clinical updates, IASP 2012; 20 (2): 1-5

Azevedo Sao Leao Ferreira K, et al. Support Care Cancer 2006; 14 (11): 1086-93

ETIOLOGY OF CANCER PAIN



Tumor-related

Bone and soft-tissue involvement

Visceral spread

Paraneoplastic neuropathy



Treatment-related

Chemotherapy-induced peripheral neuropathy

Radiation-induced brachial plexopathy

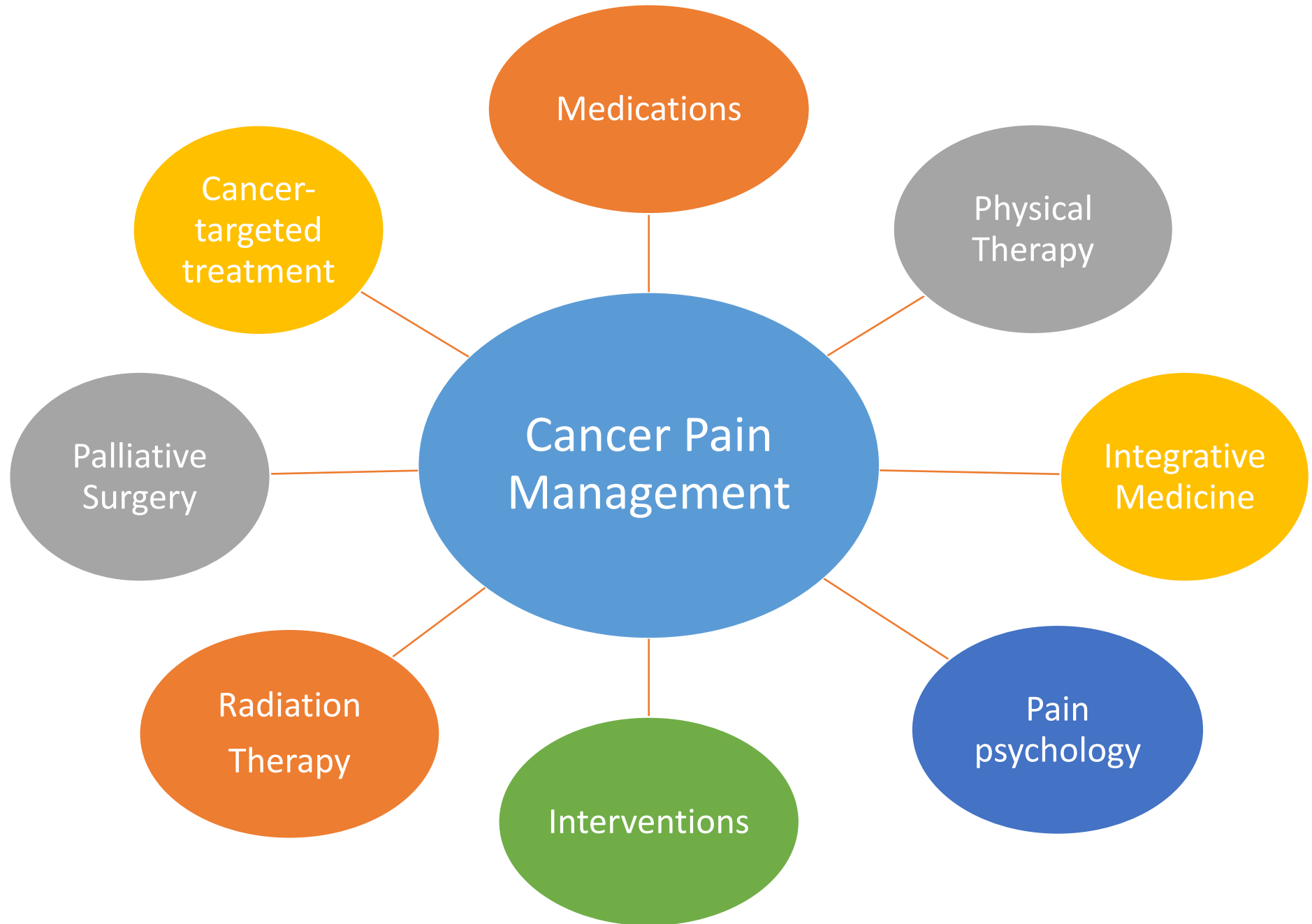
Post-surgical stump pain

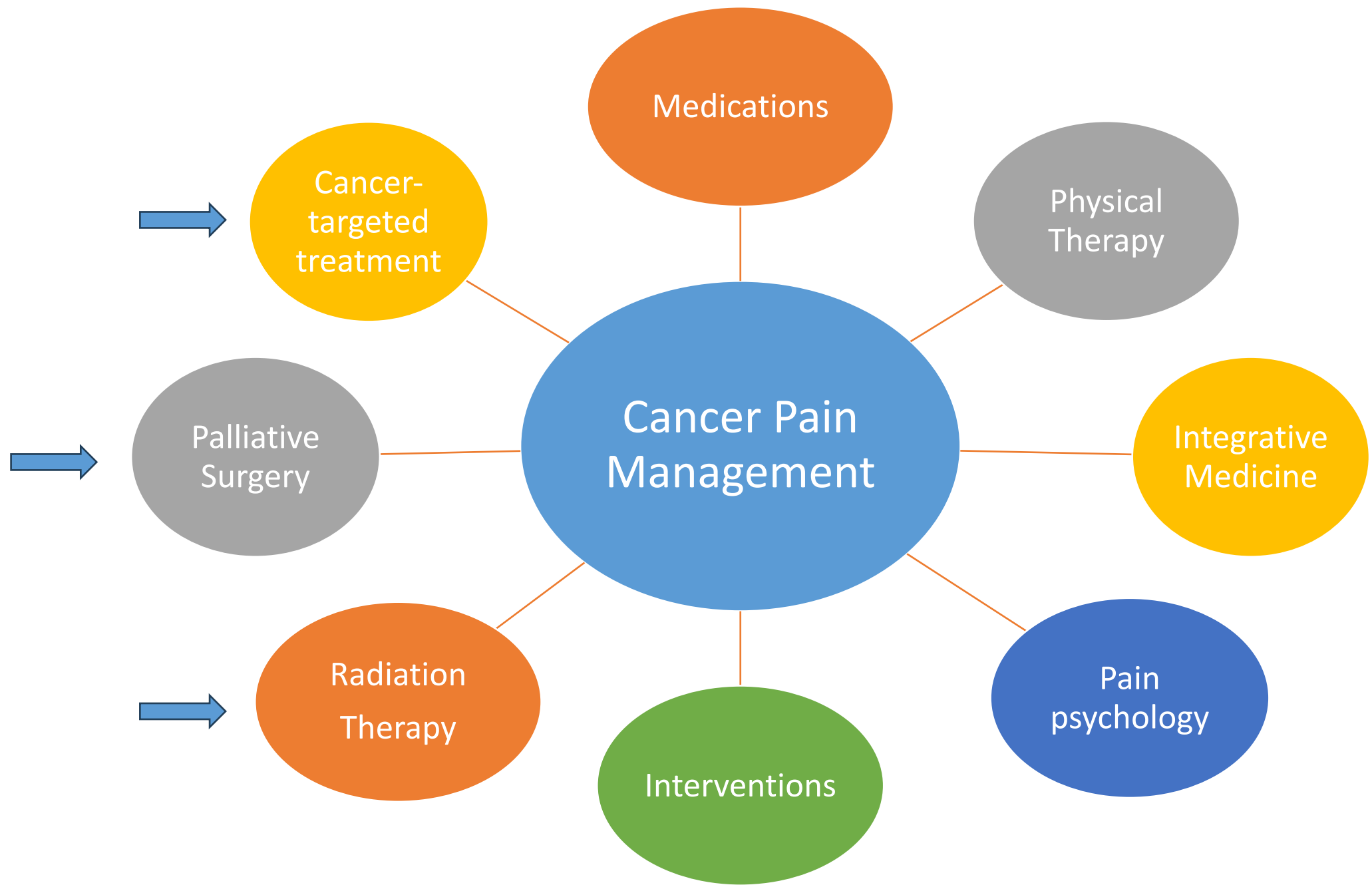
Post-mastectomy/post-thoracotomy pain



Survivorship

Non-malignant chronic pain





Why is it challenging to achieve pain control without sedation?

Two long-held beliefs

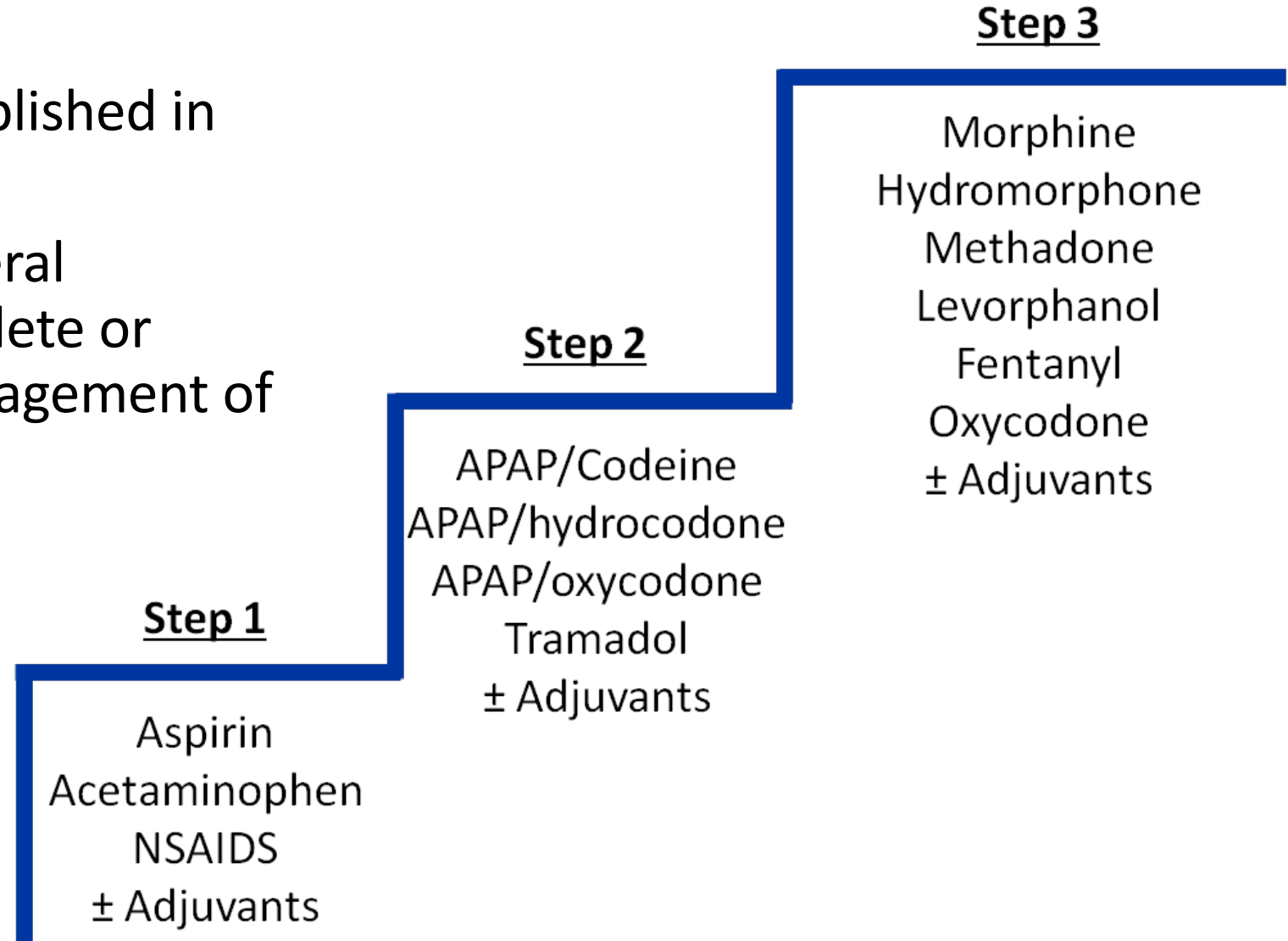
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graph TD; A([Two long-held beliefs]) --> B[Cancer pain = OPIOIDS]; A --> C[Cancer pain is an exception to the rule];
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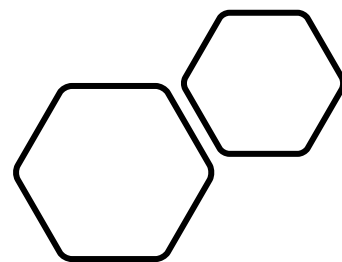
Cancer pain
=
OPIOIDS

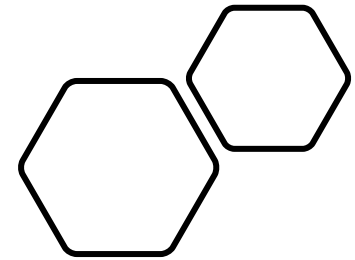
Cancer pain is an
exception to the rule

WHO stepladder

- WHO step ladder established in 1984
- Relies on oral/parenteral medications for complete or complex medical management of cancer pain







Morpheus, God of dreams

What is the evidence for opioids?

“Opioids are the most commonly used treatments for cancer pain management, and, although we might have assumed that there were placebo-controlled trials to support this widespread practice, our findings highlight that the evidence is largely lacking.”

TABLE 8 Summary of evidence on the efficacy of opioid analgesics compared with placebo.

Opioid	Evidence on efficacy	
	Background pain	Breakthrough pain ^a
Tapentadol	Effective, moderate evidence	Uncertain
Codeine	Effective, weak evidence	Uncertain
Morphine	Inconclusive evidence	Uncertain
Buprenorphine	Inconclusive evidence	Uncertain
Tramadol	Inconclusive evidence	Uncertain
Fentanyl	Inconclusive evidence	Effective, strong evidence
Hydromorphone	No evidence	Uncertain
Methadone	No evidence	Uncertain
Oxycodone	No evidence	Uncertain

^aThe presence or absence of placebo-controlled trials not reported in key guidelines or systematic reviews.

*Is it possible to achieve
Cancer pain control WITH
preserved mental clarity?*

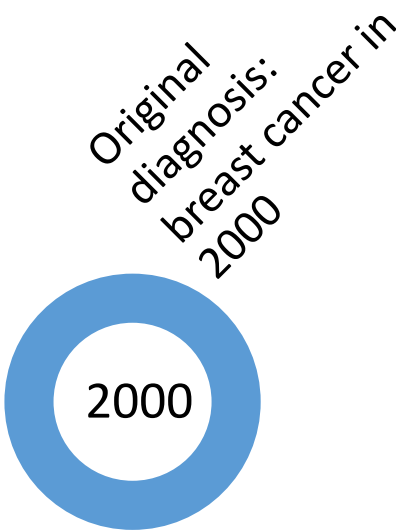


YES

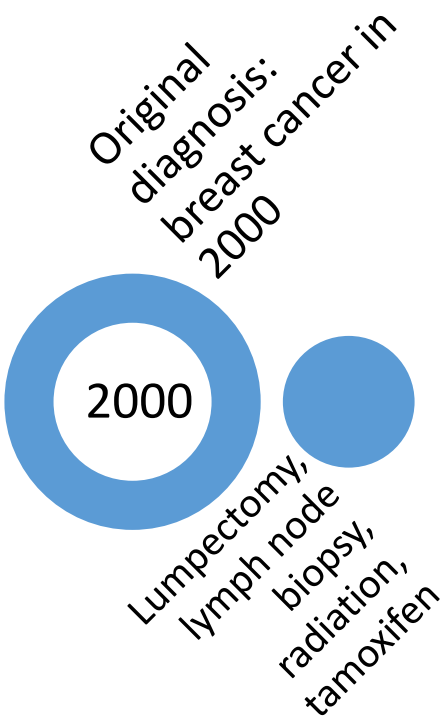


CHERYL

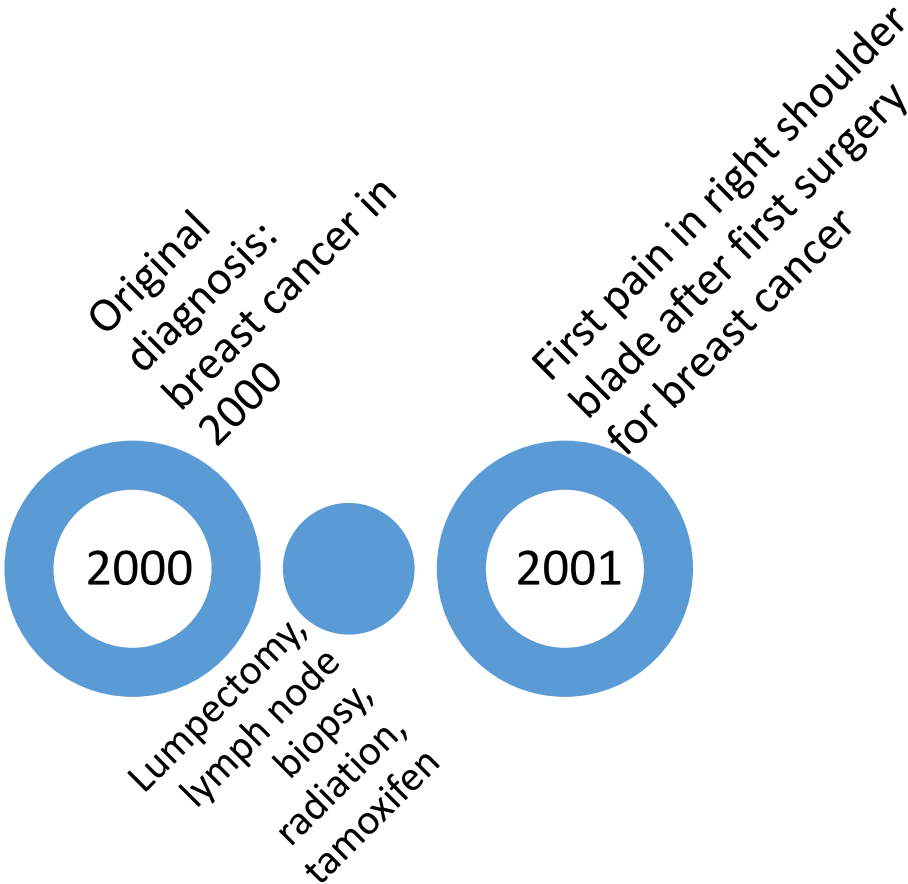
Cheryl's (medical) story



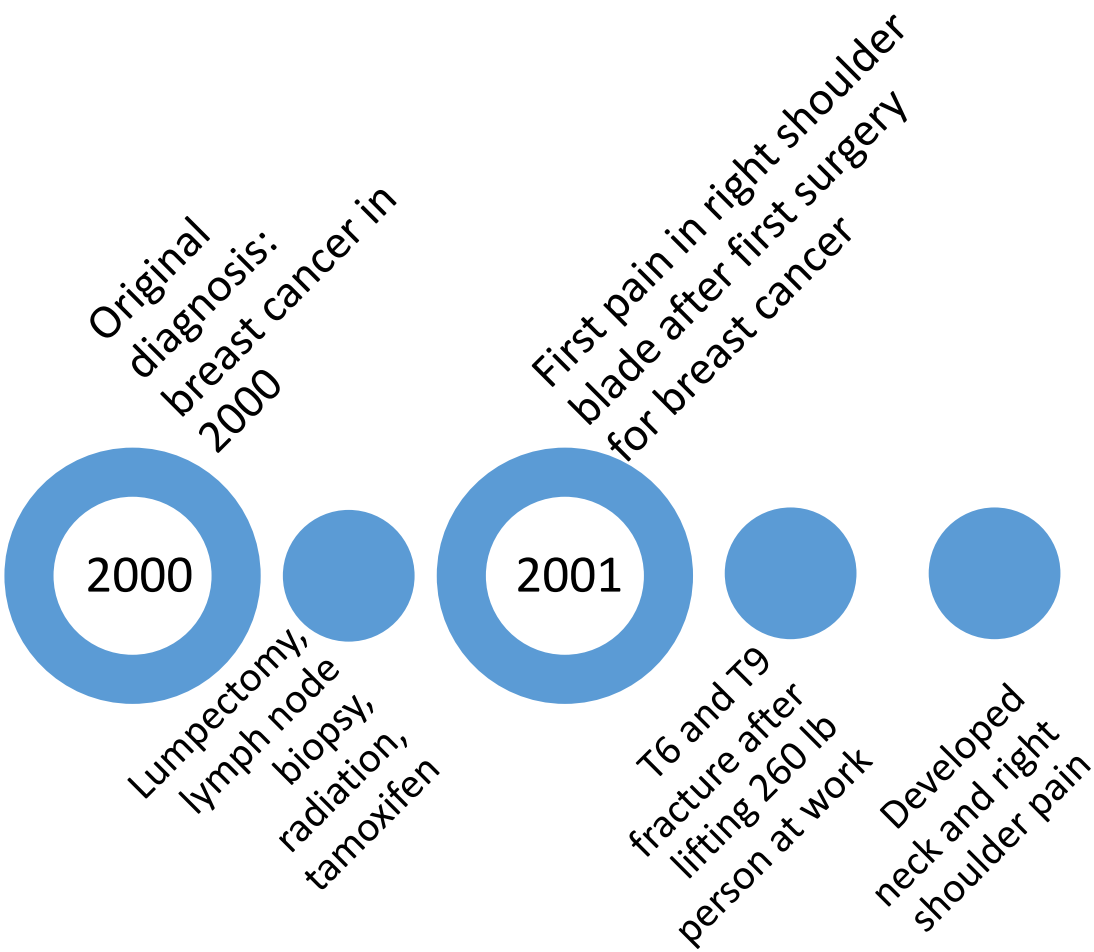
Cheryl's (medical) story



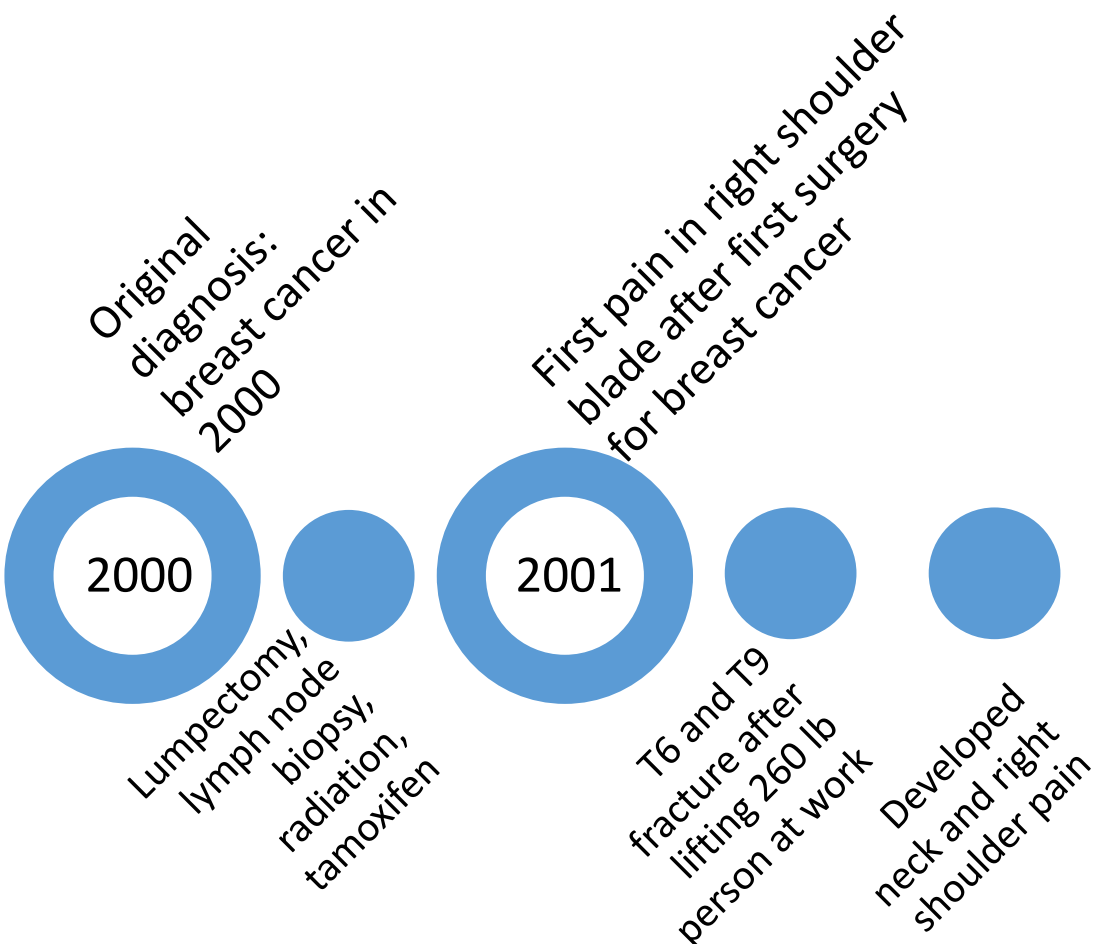
Cheryl's (medical) story



Cheryl's (medical) story

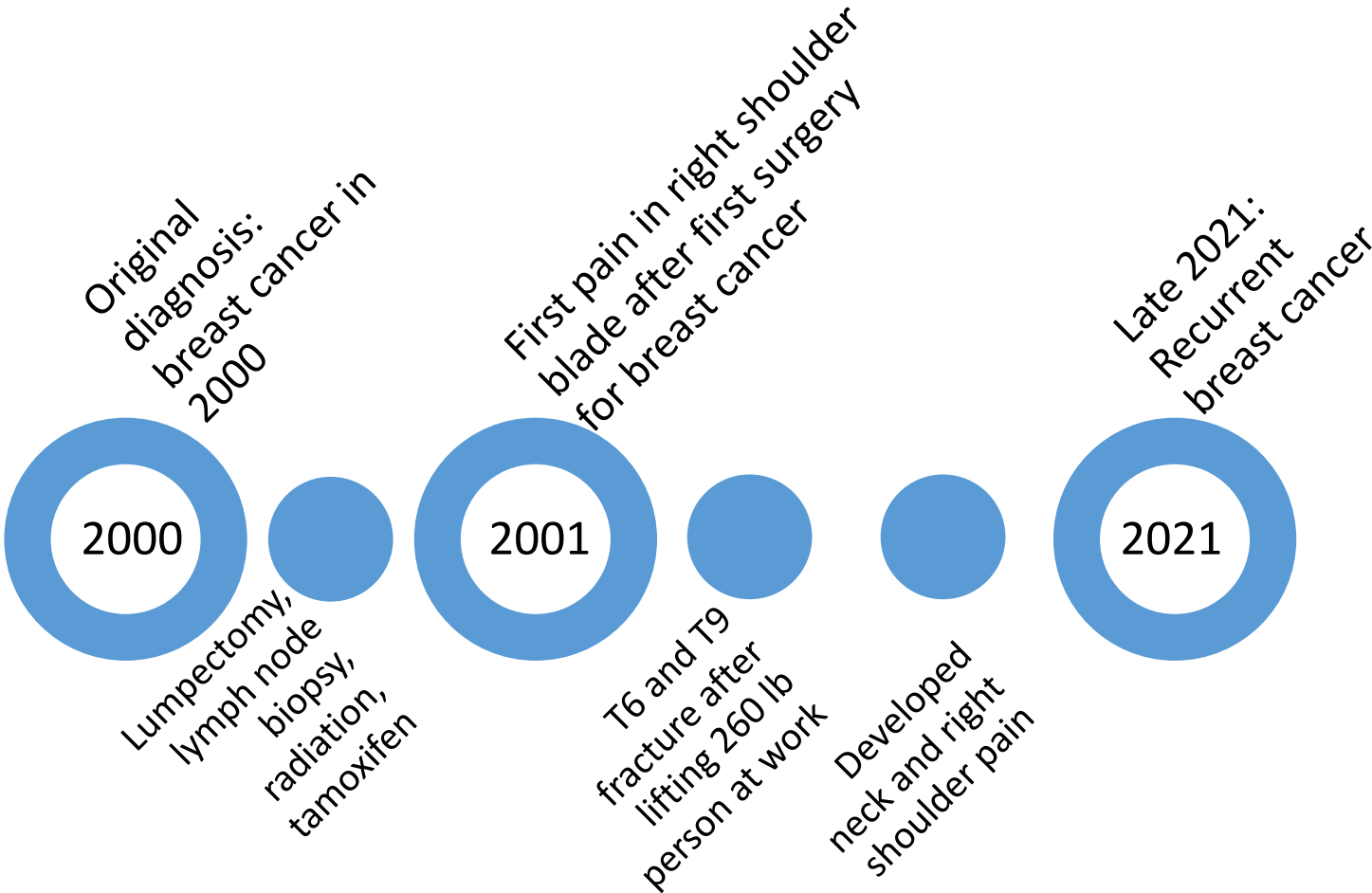


Cheryl's (medical) story

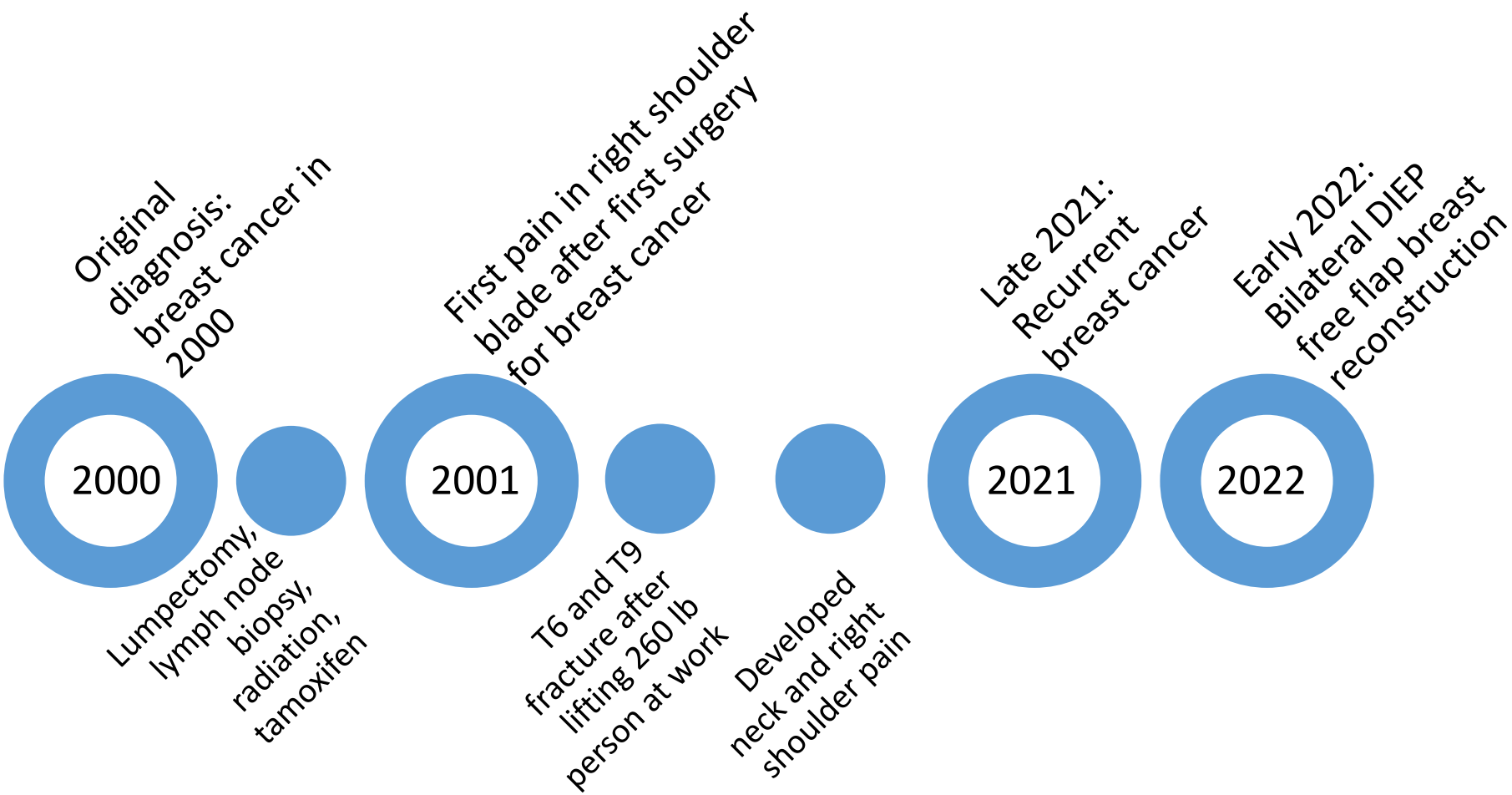


Fast Forward

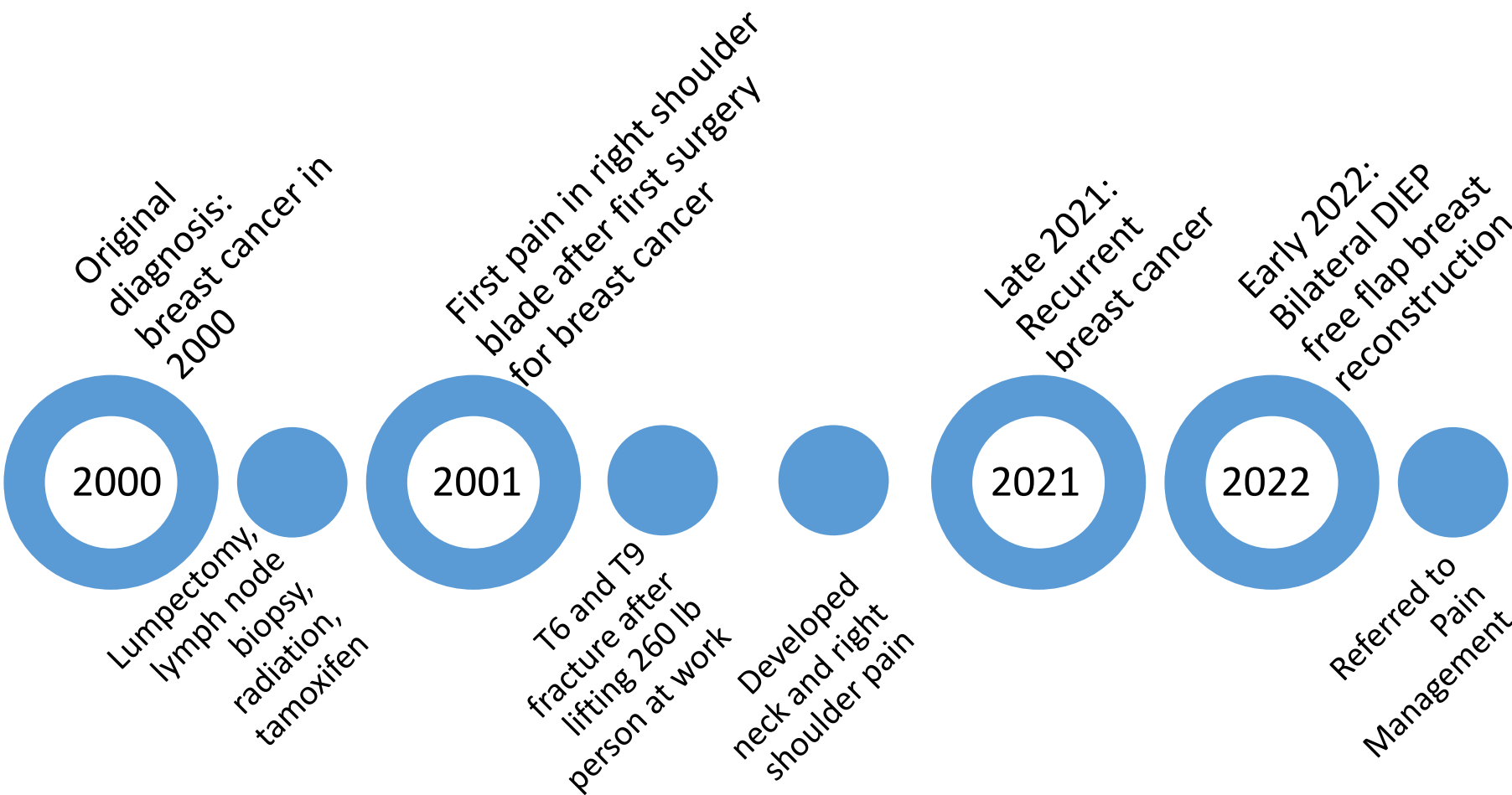
Cheryl's (medical) story



Cheryl's (medical) story



Cheryl's (medical) story



Our Concerns

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I need drug testing for work

Gabapentin somewhat helpful but sedating

I need to be alert at work

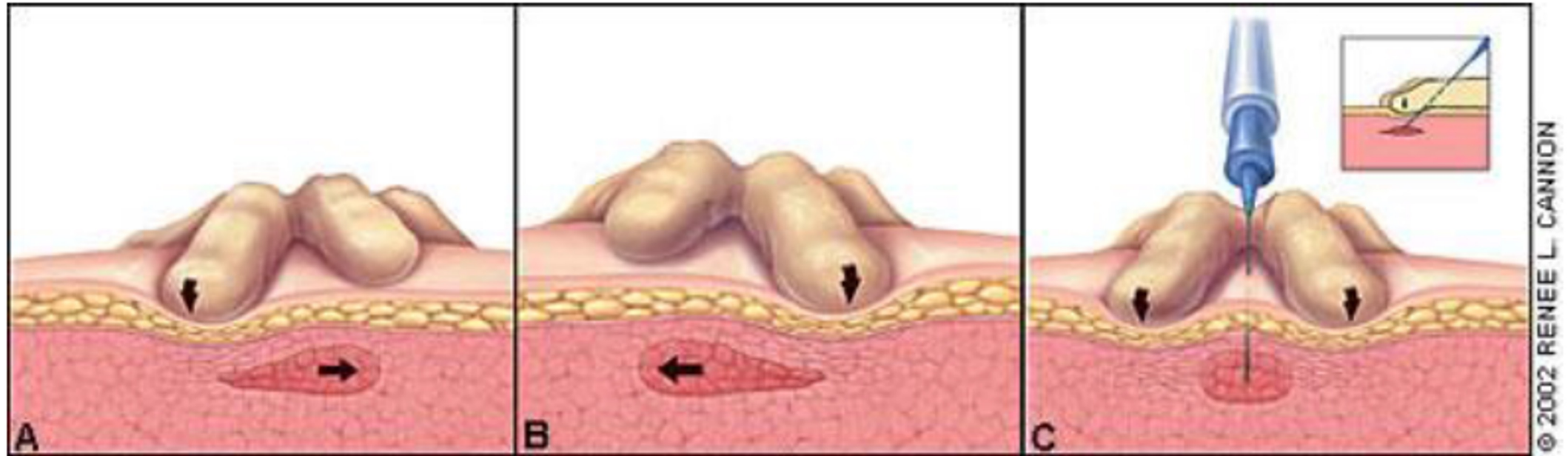
PT too difficult during chemotherapy; provokes pain

Muscle relaxant somewhat helpful but also sedating

"I hate taking pills"

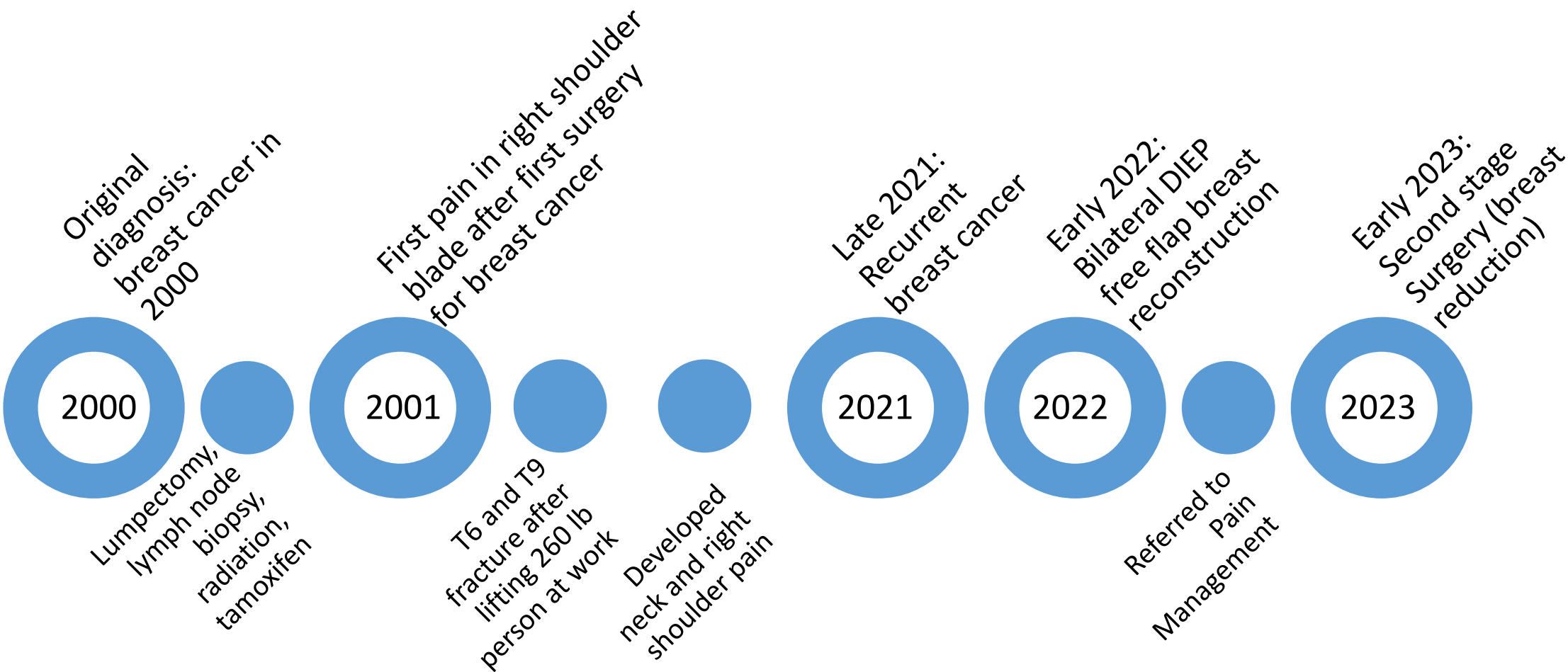
I don't want to take "strong stuff"

Trigger Point Injection

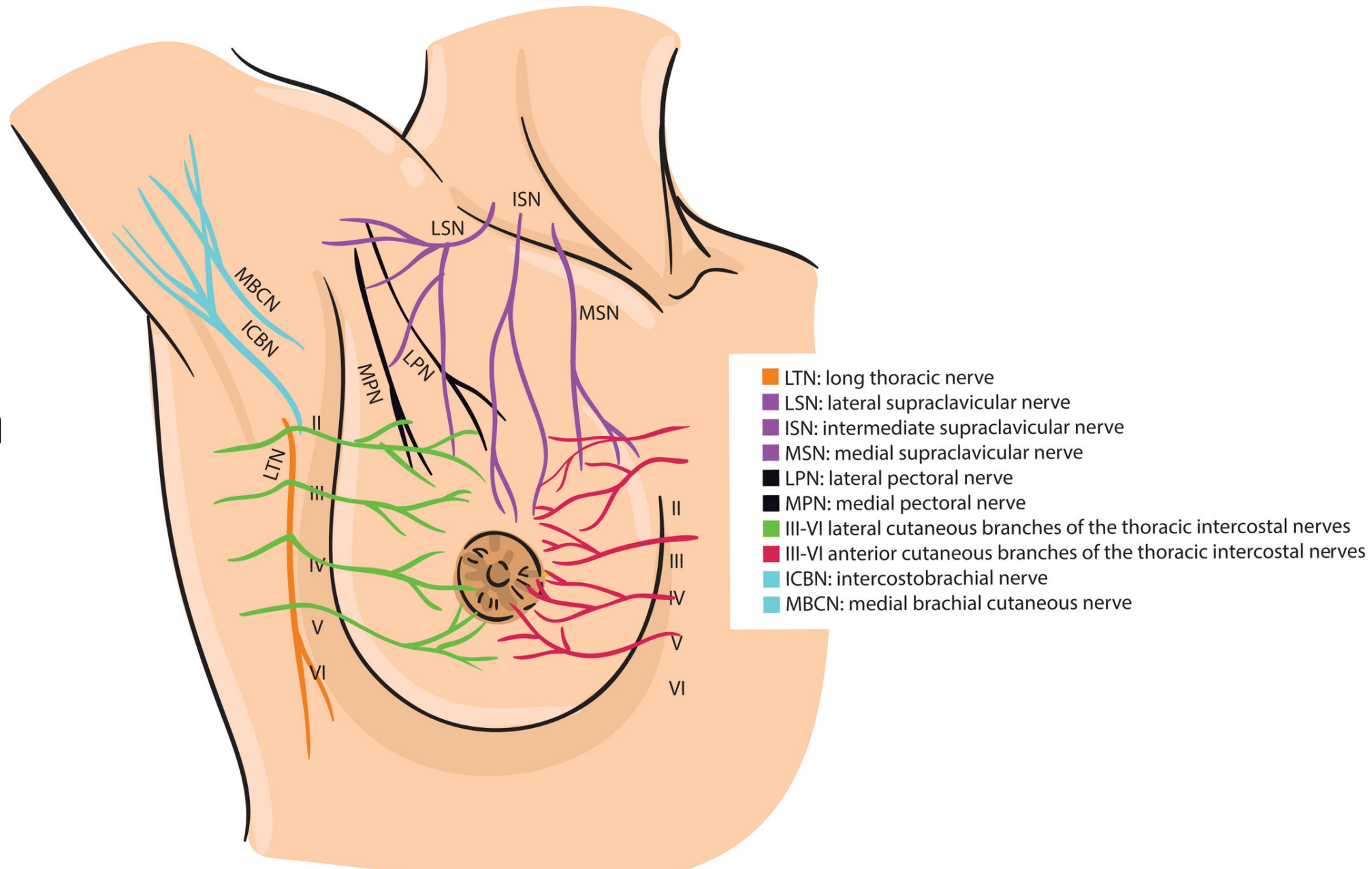




Cheryl's (medical) story

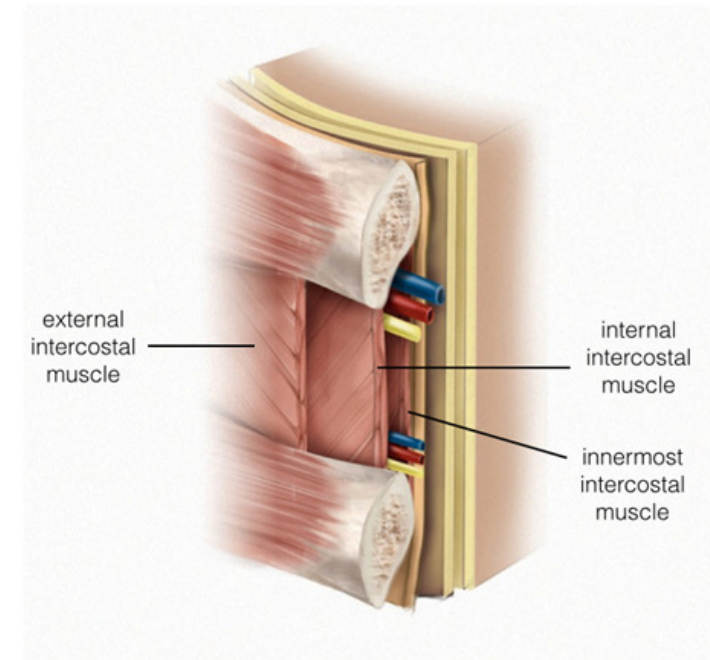


Anatomy/ nerve distribution



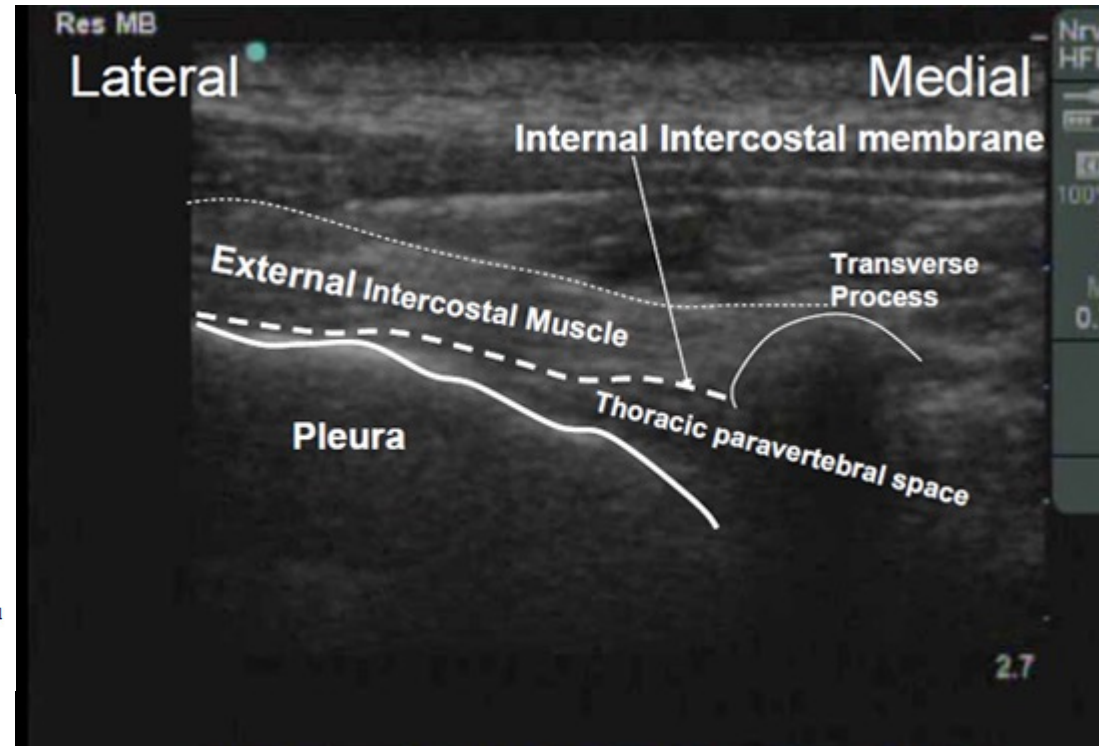
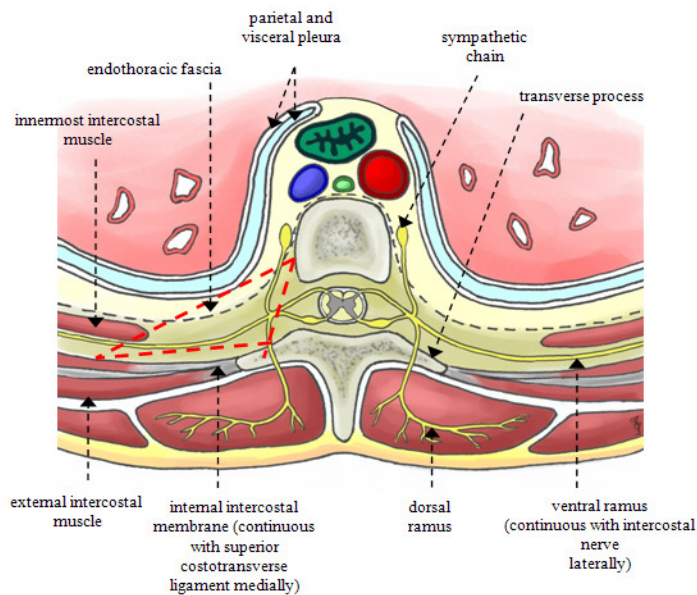
Intercostal nerve block

- Intercostal covers one level
- Between internal and innermost intercostal muscle



Paravertebral nerve block

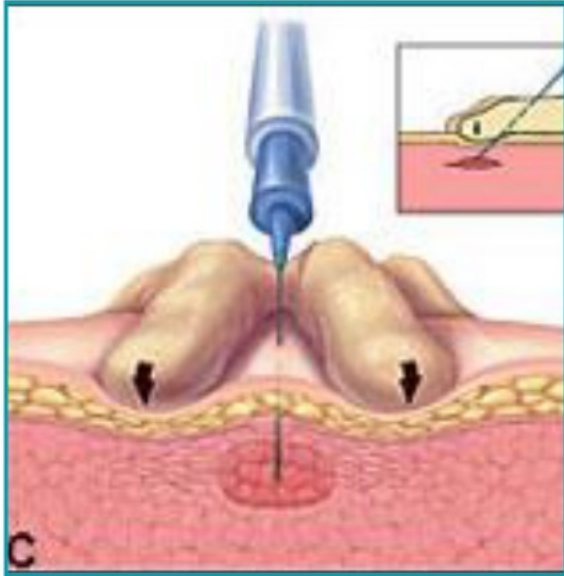
- Paravertebral covers more midline and multiple levels of spread
- The TPVS contains mainly fatty tissue, and is traversed by the intercostal or spinal nerves, intercostal vessels, dorsal rami, rami communicantes, and the sympathetic chain. The spinal nerves do not have a fascial sheath in the TPVS, which explains their susceptibility to local anesthetic blockade.



What's next?

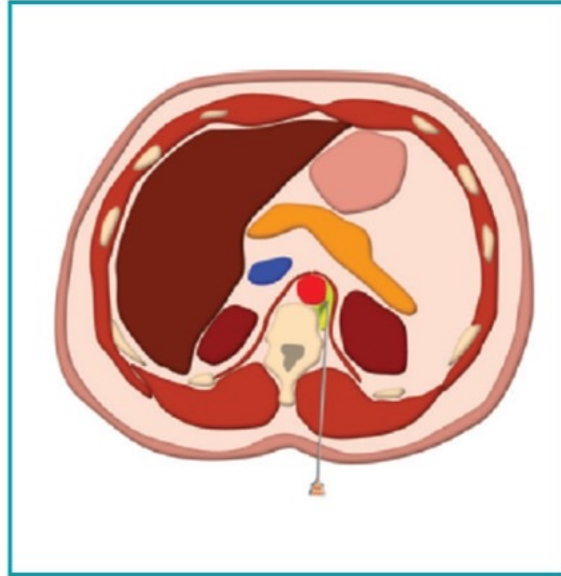


Types of Procedures--By Technique



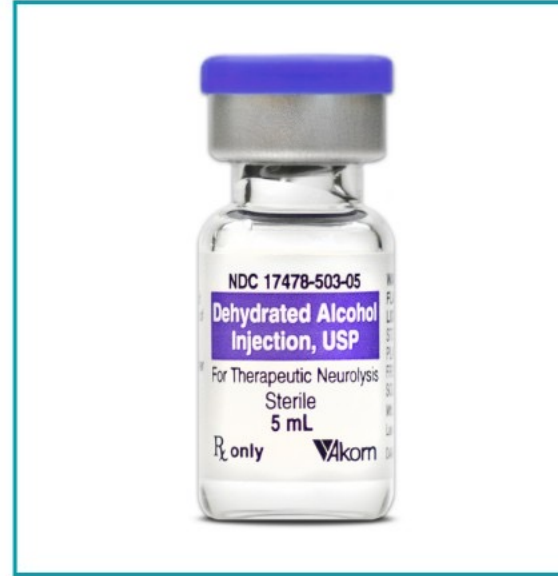
Superficial

Trigger Point Injections



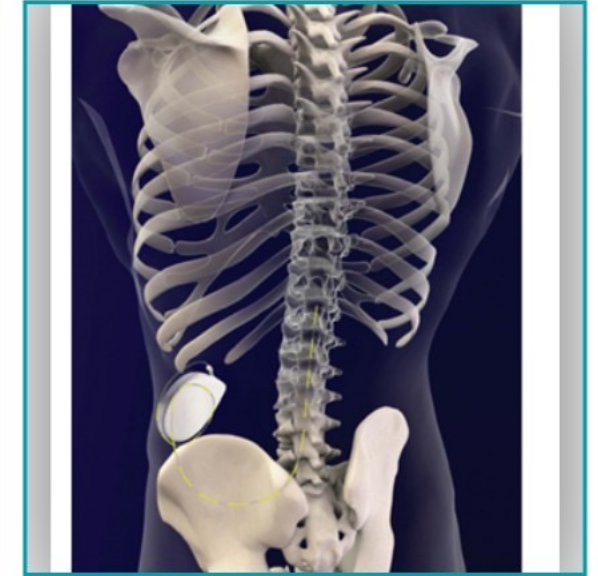
“Nerve Blocks”

Sympathetic Blocks
Peripheral nerve blocks
Brachial plexus blocks
Joint steroid injections
Epidural steroid injections



Neurolysis

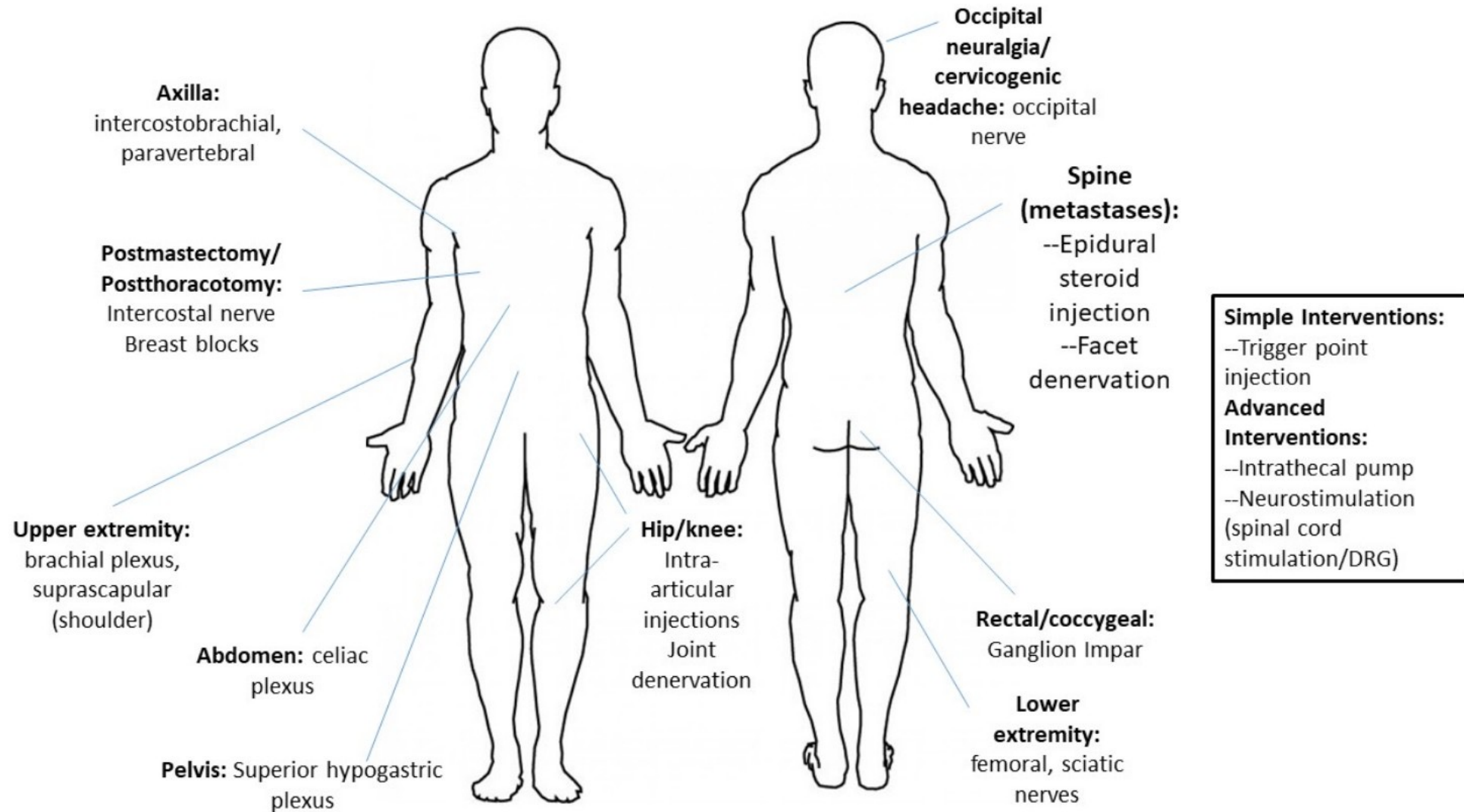
Neurolytic sympathetic blocks
Neurolytic brachial plexus/peripheral nerve blocks



Advanced Therapies

Intrathecal Pain Pump
(prognosis >2-3 months)
Epidural infusions (limited prognosis)

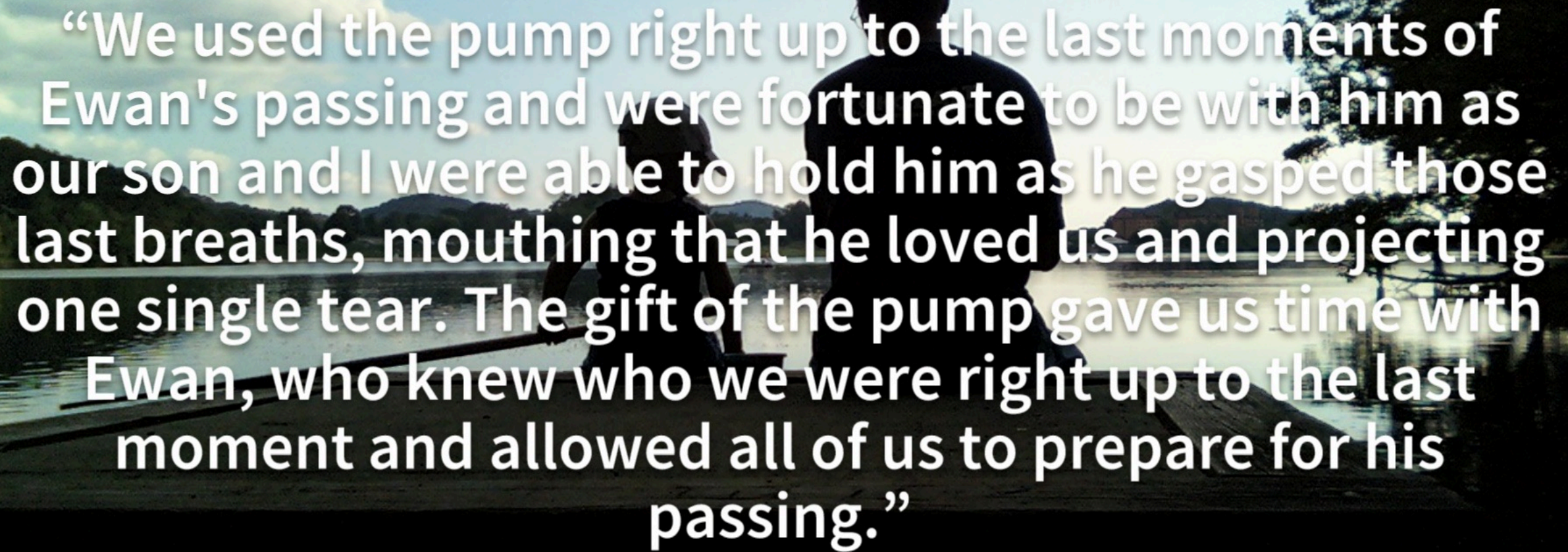
Types of Procedures--By Location



*Is it possible to achieve
Cancer pain control WITH
preserved mental clarity?*



YES

A silhouette of a man and a child fishing on a dock by a lake under a cloudy sky. The man is holding a fishing rod, and the child is sitting next to him. The text is overlaid on the image.

“We used the pump right up to the last moments of Ewan's passing and were fortunate to be with him as our son and I were able to hold him as he gasped those last breaths, mouthing that he loved us and projecting one single tear. The gift of the pump gave us time with Ewan, who knew who we were right up to the last moment and allowed all of us to prepare for his passing.”

--Kirsten, Ewan's wife

Future research questions

- Individual genetic signatures and appropriate pain control
- How do we work together to formulate individual treatment plans?
 - Patient care can feel too algorithmic
- New pain medications that provide analgesia without sedation
- Dissemination of tools (How do we help patients get access to treatment? How do we get clinicians to become aware of the breadth of treatments available)

Cheryl's Closing Thoughts

