Appendix A. Morphine Milligram Equivalents (MME) Conversion Table

Opioid Medication	MME Conversion Factor
Hydromorphone (mg), IV	20.0
Fentanyl (mcg), IV	0.3
Morphine (mg), IV	3.0
Oxycodone (mg), PO	1.49
Percocet (mg), PO	1.49
OxyContin (mg), PO	1.49
Hydrocodone (mg), PO	1.0
Vicodin (mg), PO	1.0
Hydromorphone (mg), PO	4.0
Tramadol (mg), PO	0.1

mg, milligrams; mcg, micrograms; IV, intravenous; PO, oral.

Appendix A. The MME conversion table reflects the information used to convert all opioid analgesics taken by the patient into comparable units (MMEs) in order to examine opioid consumption between patients.

Appendix B. Moderators of COLP Efficacy on Patient Reported Postoperative Daily Opioid Consumption

Moderator	Moderator groups	Effect	se	t	p	95% CI
Sex						
	Male	-4.9	3.4	-1.5	0.145	(-11.5, 1.7)
	Female	-26.0	3.7	-7.0	<.001	(-33.2, -18.7)
Age*						
	48	-28.6	3.4	-8.5	<.001	(-35.2, -22.0)
	63	-13.3	2.5	-5.3	<.001	(-18.3, -8.4)
	72	-4.1	3.3	-1.2	0.218	(-10.7, 2.4)
Fibromyalgianess*						
	6	-3.3	3.5	-0.9	0.35	(-10.1, 3.8)
	9	-11.1	2.7	-4.2	<.001	(-16.3, -5.9)
	16	-29.5	4.1	-7.1	<.001	(-37.6, -21.4)

*Quantitative variables with moderator groups defined by values corresponding to the 16th percentile, the median, and the 84th percentile of the distribution.

Appendix C. Moderators of COLP Efficacy on Patient Reported Postoperative Worst Daily Pain

Moderator	Moderator groups	Effect	se	t	p	95% CI
Baseline pain*						
	3	-0.2	0.3	-0.7	0.488	(-0.8, 0.4)
	5.75	-1.3	0.2	-7.2	<.001	(-1.7, -1.0)
	7.25	-1.9	0.3	-7.4	<.001	(-2.5, -1.4)
Age*						
	47	-1.9	0.3	-7.6	<.001	(-2.4, -1.4)
	63	-1.0	0.2	-5.1	<.001	(-1.3, -0.6)
	72	-0.4	0.3	-1.7	0.099	(-0.9, 0.1)
Temporal Summation of Pain (TSP)*						
	1	-0.3	0.3	-1.2	0.240	(-0.8, 0.2)
	2.6	-0.9	0.2	-5.1	<.001	(-1.3, -0.6)
	4.17	-1.5	0.3	-6.2	<.001	(-2.0, -1.1)
Fibromyalgianess*						
	6	-0.5	0.3	-1.9	0.055	(-1.0, 0.0)
	9	-1.0	0.2	-5.2	<.001	(-1.4, -0.6)
	16	-2.2	0.3	-7.3	<.001	(-2.8, -1.6)

*Quantitative variables with moderator groups defined by values corresponding to the 16th percentile, the median, and the 84th percentile of the distribution.

Appendix D: Talking points used by study staff to explain open-label placebo concept when recruiting patients.

1. We are doing an exciting study using the placebo effect to help relieve pain after surgery.
    a. If you have any questions about the study, feel free to interrupt me at any time.

2. Have you heard of the placebo effect before?

3. The placebo effect is powerful. When we test drugs in clinical trials against placebo, there is usually big symptom relief for patients on placebo.
    a. Placebos activate natural pain-relieving mechanisms in your brain and body.
    b. Your body can naturally release neurotransmitters to reduce pain. For example, endorphins are released to produce a runner's high, and you don't feel pain as much.
    c. Mechanisms activated by placebos are the same as those activated by painkilling drugs. Actually, the painkilling drugs that we typically use make use of this natural painkilling system that you have set up in your body.
    d. With traditional placebos, patients are unaware they're not taking a real drug, but new research studies suggest that these placebo effects can happen even when patients know they're taking a placebo, a concept referred to as "open-label placebo".
        i. This has been shown in studies involving low back pain, irritable bowel syndrome, chemotherapy nausea, and migraine attacks.

4. This study will have patients take a placebo at the same time as their typical pain medications in order to combine the benefits of "natural" pain relief (placebo) with medication-based pain relief (analgesic medications after your surgery).

5. We think that as your brain and body associate placebo pain relief with medication pain relief, through a process called conditioning, the placebo pain relief may become even more powerful. We are testing whether this method can reduce the amount of medication you need for pain relief when you go home from the hospital. The placebo alone may be enough to manage a lot of your pain after you leave the hospital.

6. If you agree to participate in this study, you will be randomized to either having your care as usual (control condition) or adding placebo pills to your care as usual.

7. No matter what condition you are in, you will have access to as much normal painkiller as you need. We definitely want you to be as comfortable as possible after your surgery and will not restrict your normal care in any way.

8. Adherence to study procedures is important, but belief the placebo is working may not be.
    a. You don't have to believe in this. If it works, it will be an automatic response.

b. What is important is faithfulness to taking the placebo pills as instructed in this study in order to receive maximum benefit.

9. Brief description of protocol
    a. We are going to ask you to take a placebo every single time you take an opioid.
    b. You do not need to change your normal habits for taking your regular pain medication. Please proceed as usual, and just add in a placebo pill every time you take your normal medication. This will build the association between placebos and pain relief.
    c. We are also going to be asking you to take three scheduled placebo pills starting the second day after your surgery, while still in hospital—one in the morning, one in the middle of the day, and one in the evening. Take these whether you have pain or not. If you need opioids, continue to take those as prescribed while still continuing to pair the placebo pills with the opioids.

10. Thanking participant for their willingness to participate.
    a. Our goal in this study is to see if placebo effects can lower your use of opioids and still provide at least as much pain relief as being in the control. The control group is very important to figure this out. This study could have a big impact on making opioids more effective and may be a good strategy to help reduce the number of opioids people need to take.

11. See if patient has any questions and verify patient understand study procedures. If not, figure out what needs repetition or elaboration.