

Enhanced Recovery After Surgery

A guide for patients



Northern LightSM

Eastern Maine Medical Center

Patient Education Booklet

Your Guide to Elective Cesarean Delivery



Northern Light Eastern Maine Medical Center cares about your surgical success and the health of you and your baby. The information contained in this patient guide is designed to help you specifically with the surgical aspect of your delivery. It explains what you can expect through all phases of your surgery--before, during, and after your Cesarean Delivery. It also contains important guidelines you can follow to help yourself have a safe and quick recovery. Additional information about caring for your newborn may be provided separately.

Patient Name: _____

Surgeon Name: _____

Preparing for the birth of a child can feel overwhelming, even without the additional concern of delivery by surgery. You may be receiving a lot of information. It is important to remember that every patient is different. Your care team will tailor your recovery program to your needs and your surgical team is here to help you from beginning to end.

During your hospital stay, you will be a part of the Enhanced Recovery after Surgery (ERAS) care path. This is an evidence-based program with a pathway for each phase of your care before, during, and after surgery. Let's get started with your preparation for surgery!

Please read this booklet as soon as you are able and bring it with you to the hospital on the morning of your surgery.

It is important for you, your family, and your friends to understand what to anticipate so that everyone can fully participate in your recovery. If you have a partner or someone who will be helping you at home as you recover from surgery, be sure to have them read this Guide as well.

This booklet includes details about

1. Getting ready for your surgery
2. What to expect on the day of surgery and while you are recovering in the hospital
3. Planning for recovery and going home after surgery
4. What to expect once you are home

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You are part of the team!

For best results, you want to be at your optimal health. This will help with healing and will enable you to better care for yourself and your baby after delivery.

As soon as you know you are scheduled for surgery

- **Share your health history.** It is important that you tell your provider about your health habits, your medications, and any supplements you may take. The more you share your history with us, the better able we are to care for you.
- **Stay active.** Most exercises are safe to perform during pregnancy and being in better shape physically can help you recover from surgery faster. Please talk with your provider about your exercise program to ensure it is safe and appropriate during your pregnancy.
- **Maintain a healthy diet.** A healthy diet during pregnancy that includes fruits, vegetables, whole grains, and lean meats and proteins is good for you, your baby, and your surgical recovery.

Consider quitting

If you smoke, use this pregnancy as an opportunity to stop. Smoking during pregnancy is detrimental to the health of your baby and makes it harder for surgical wounds to heal.

Resources for Quitting Smoking:

Partners for Tobacco free Maine
American Heart Association

1-877-786-4986

1-800-937-0944 | www.AmericanHeart.org

What is a Cesarean Section (C-Section)?

A C-Section is a surgery that allows a baby to be born through an incision in a woman's abdomen, rather than through the vaginal canal. There are different surgical techniques, but most often, the incision is made low across the woman's abdomen (at the pubic hairline) and through the uterus. In some cases, the incisions could be vertical, rather than from side-to-side.



Once the incisions are made and the uterus is open, your surgeon will guide your baby out through the incision. During this time, the umbilical cord will not be clamped for 1 minute (called "delayed cord clamping") to allow the maximum amount of blood to be transferred to the baby from the placenta.

Your anesthesia team is made up of an anesthesiologist and a nurse anesthetist working with them. They will keep you comfortable during the surgery using a type of anesthesia called Spinal Anesthesia. This is when medication is injected in your back to make your abdomen and legs numb so you do not feel pain from the surgery. Spinal anesthesia is the safest anesthesia for you and your baby and is the first choice for cesarean sections. It also allows you to be awake and enjoy support from your family member and interact with your baby once the delivery is complete. If you would like to watch your baby being born, please ask your surgeon about using a clear drape or mirror when it is time for your baby to be delivered.



Kangaroo Care

If you and your baby are both doing well, immediately after delivery, your baby will be placed on your chest, with skin-to-skin contact, while the surgeon finishes the procedure. Known as Kangaroo Care, your baby will also stay skin-to-skin while you transfer to your bed and during your stay in recovery. Your nurses will help you with positioning, so you feel safe holding your baby. If you wish, your support person will be beside you to help.

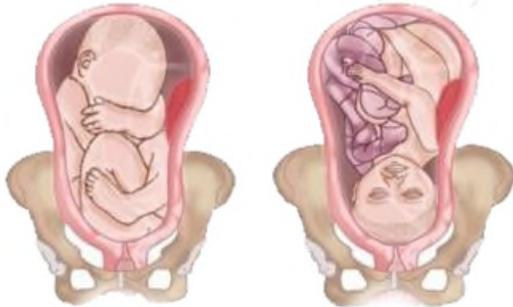
Kangaroo Care helps stabilize your baby's temperature, heart rate, breathing, and blood pressure. It also helps decrease crying. Benefits for you include increased bonding with your baby, increased breast milk

supply, decreased pain and bleeding, and decreasing possible post-partum depression.

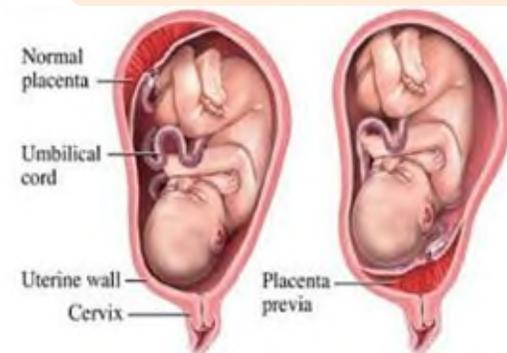
When is a Cesarean Section needed?

A C-Section is a major abdominal surgery and the decision to deliver a baby this way is made when the risk of a vaginal birth is greater than the risks of this type of surgery. A baby may need to be delivered by Cesarean Section due to:

- **Poor fit:** The baby's head is poorly positioned or too large. This may prevent the baby from fitting through the birth canal.
- **Baby in distress.** The baby shows signs that he or she may not be able to stay healthy through the stresses of labor.
- **Labor fails to progress.** The cervix does not efface (thin) and dilate (open) enough. As a result, the baby cannot descend into the birth canal.
- **The wrong position.** The baby is in a breech position with feet or buttocks first, or the baby is lying sideways across the pelvis.
- **Problems with the placenta.** In some cases, the placenta (the organ that nourishes the baby) is between the baby's head and the birth canal (placenta previa). Or the placenta is pulling away from the uterus (placental abruption).
- **Maternal health problems.** An ongoing health problem or a problem that arises during pregnancy can make a vaginal birth risky.
- **Baby with special needs.** A health problem or birth defect can make labor or a vaginal birth risky.
- **An active vaginal infection.** Herpes and HIV infections could infect the baby during the passage through the birth canal.



Breech/Normal Presentation



Normal Placenta/Placenta Previa

What are the risks of a Cesarean Section?

As with any surgery, cesarean birth has risks. Your doctor will discuss possible risks with you, including:

- Longer recovery period than with vaginal birth
- Bleeding
- Infection
- Injury to nearby organs
- Blood clots in the legs, pelvis, and/or lungs
- Reaction to anesthesia (spinal or general)
- Complications with future pregnancies



Although there are risks associated with the surgery, your doctor has determined that the benefits of delivering your baby by cesarean section outweigh those risks. You can also be confident that everyone on the surgical team is working together to keep you and your baby safe!

Use the summary checklist on the next page as a guide to what you need to do to prepare for your surgery and recovery after surgery.

What to expect – why prepare?

Preparing for surgery can be overwhelming. Know that your team is here to help from beginning to the end of your stay. You will be a part of the Enhanced Recovery after Cesarean Section (ERAC) care path. This is an evidence-based program with a pathway for each phase of your care before, during, and after surgery.

The more prepared you are, the better your recovery will be, and the quicker you can return home and begin your normal life with your new baby.

You are a part of the team and your participation is crucial to your recovery.

This education book is to guide you through preparing for surgery and recovery.

Please read and follow the instructions and bring this book with you to the hospital.

Frequently Used Phone Numbers

Northern Light Eastern Maine Medical Center (main line)	207.973.7000
Northern Light Health Pre-Registration	207.973.8881
Labor and Delivery	207.973.8770
Postpartum Unit	207.973.8730
Lactation	207.973.8673
Childbirth Education	207.973.8742
My Obstetrician's Office	_____

Preparing for Surgery

- **Time in the hospital**

Most women having a cesarean section stay in the hospital for three nights. If you are doing well, you may be discharged home 24 hours early. If you decide to leave 24 hours early, your baby's pediatrician will need to provide an early discharge order as well. If you experience complications from the surgery, you may need an extra day or two to recover in the hospital.

- **Avoiding constipation**

Women having cesarean sections are at an increased risk of constipation due to decreased mobility and side effects of pain medications. You can prevent constipation before surgery by drinking plenty of water (64 oz daily), staying active if you are able, and eating fiber-rich foods. If this is not enough, you can use Miralax 17 grams daily or 100 mg Colace each night to help you stay regular.

One to Two Weeks Prior to Surgery

Preoperative Appointment

- You will meet with your surgeon to discuss the procedure and sign consent forms.
- You will discuss the type of anesthesia you will have. Most women receive spinal anesthesia, which is discussed in this guide, and with your anesthesiologist on the day of your surgery.
- You will review your medications and supplements. Be sure to bring an updated list of your medications to this appointment. It may be recommended that you stop taking certain medications prior to surgery (such as aspirin or blood thinners).
- Your surgeon will review your medical history and determine if you need to have lab work or other medical tests done.
- A few days prior to your surgery, you will receive a phone call from a nurse in the anesthesiology department who will discuss your current medications with you again. They will also remind you of which ones you are to take the morning of your surgery.

The Night Before Surgery

Nothing by mouth beginning at midnight

You may eat as normal the day prior to your surgery. You may want to have a light snack later in the evening because you will not eat anything after midnight before your cesarean section.

Drink Clear Liquids

You may continue to drink small amounts of **clear liquids** up until 3 hours before surgery. **Drink nothing else.** You may **not** have milk or cream. Any clear juices you drink should not contain pulp. If you consume anything other than clear liquids, your cesarean section may need to be rescheduled.

Showering

If your surgeon's office provided you with a special chlorhexidine surgical wash, this is what you will use for showering the night before your surgery. Using the soap from the office, use half of the bottle and wash from the neck down (do not use this soap on your face). Use clean towels, clean pajamas and place clean sheets on your bed.

DO NOT SHAVE YOUR ABDOMEN (BELLY) AREA.

If your surgeon did not give you a special surgical wash to use, you will follow the same directions as above, but use an over-the-counter antibacterial soap instead.

The Day of Surgery

The morning of surgery

- Take another shower with the other half of the bottle of chlorhexidine wash (or an antimicrobial soap). Use a clean towel and put on clean clothes.
- Take the medications you were instructed to take during your pre-operative phone call. Remember, you can have small amounts (10-12 oz) of clear liquids. **Take your last drink 3 hours prior to your surgery and then drink nothing else.**

What to bring in the hospital

- Glasses, hearing aids, toiletries, music (phone and ear buds)
- Advanced directive (optional)
- Leave jewelry at home except a wedding band which is ok to wear
- Loose, comfortable clothing that allow you to comfortably breastfeed (nursing bra/tank-tops, robe)
- Pillow/Boppy pillow (optional)
- Your newborn baby bag (include 1-2 outfits for pictures and a “going home” outfit)
- A car seat for taking your newborn home
- A current list of all your medications
- This education packet
- You will be provided with typical care items that you and your baby may need while you are here, so do not feel you need to “overpack.” Items you will be provided for your stay include sanitary pads, ice packs, underwear, peri-bottles, breast pump-with all attachments, hospital/breastfeeding gown, robes, socks with grippers, lotions for nipple care. Baby care items available include: Diapers, wipes, t-shirts, sleep sacks, bottles/nipples, and baby bath supplies.

Arriving at the hospital

- You may park in the garage, have someone drop you off, or use our free valet parking, when available, at the Main Entrance.
- Go to Patient Registration, just beyond the Main Lobby. A representative will meet with you to sign consent forms. An identifying bracelet will be placed on your wrist and then you will be taken to the seventh floor (Labor and Delivery) for pre-surgical preparation.

Pre-Surgery Area

- Once you arrive on the Labor and Delivery Unit, a nurse will bring you to a room to help you prepare for your cesarean delivery. Your support person can come with you, if you would like. Otherwise, the nurse can escort them to a waiting room until you are ready.
- You will change into a hospital gown and be given a clean pair of socks and a surgical bonnet.
- You will provide a clean catch urine sample.
- Your vital signs will be taken, and your nurse will listen for your baby’s heart tones using a handheld doppler, or you will be placed on the fetal monitor to listen to your baby’s heart for a certain amount of time.
- An intravenous catheter (IV) will be placed in your hand or arm.
- You will be given fluid therapy through your IV line.
- Your nurse will perform an Admission Assessment.
- Your nurse will show you how to use an Incentive Spirometer to help you take deep breaths after surgery.
- You will meet your Anesthesia team, your surgeon and the operating room nurse.
- If you will have a support person in the operating room (OR) with you, they will be provided with a special jumpsuit to wear into the OR suite. Due to sterility concerns and limited space, only one support person is allowed in the OR.

Operating Room

- The team will walk you to the operating room where you will sit on the edge of the OR bed.
- Your support person will wait outside the OR while the spinal anesthesia is performed.
- After your spinal anesthesia is completed, the OR nurses will listen to your baby's heart one more time, and then place a urinary catheter in your bladder. Urinary catheters are used to keep your bladder empty and safely "out of the way" during the surgery to prevent injury. Because of the anesthesia, you will not feel any discomfort during its placement. This catheter will be removed as soon as possible after surgery to prevent infection.
- You will be positioned on your back with a hip roll under your right hip to tip you slightly to the left. This shifts the weight of the baby to allow adequate blood and oxygen to you and your baby.
- You will have monitors attached to you including a blood pressure cuff, a clip on your finger to measure your oxygen levels, and heart monitoring leads. You may have a nasal canula in your nose to provide additional oxygen.
- Sequential sleeves will be put around your calves; these are sleeves that squeeze and release your legs to decrease your risk of getting blood clots.
- Once everyone is ready, your surgeon will conduct a safety time-out. Everyone in the Operating Room must agree that we have the correct patient and procedure before beginning your surgery. This is just one of the ways we keep you safe while you are here.
- You will be given an antibiotic through your IV to help prevent infection.
- Your abdomen will be cleaned with an antiseptic and blue OR drapes will be placed over you with part of the drape clipped to IV poles next to you. This allows the surgeon a sterile field to work behind. Once it is time for the baby to be delivered, you can watch using a mirror that is placed above your head, or the blue OR drape can be dropped, leaving the clear portion up.
- This entire time your anesthesiologist and nurse anesthetist will monitor your vital signs and answer any questions you have while the cesarean section is being performed.



- Once removed from your abdomen, your baby will stay at the surgical field for 60 seconds of delayed cord clamping. Then, your baby will go to the warmer. Your support person can also go to the warmer to see and touch the baby. They can also trim the umbilical cord at this time if they would like. (The need to maintain a sterile field during a C Section prevents your support person from being able to make the initial cut to the umbilical cord.)
- If your baby does not need any immediate attention, your baby will then be brought to you for Kangaroo Care. Everything the baby needs, such as vital signs taken, baby bands placed and breastfeeding, can all be done while in skin-to-skin contact with you. Weight and length can be done at a later time. Ideally, you and your baby spend at least 1-2 hours in Kangaroo Care immediately after birth.

Keeping You Warm During Surgery

Keeping patients warm during surgery begins in the presurgical area. There are lots of studies showing that surgical complication rates are lower when we keep patients warm. Here are some of the things you can expect us to do to keep you warm:

- Keep you covered with heated blankets in preop unless we need that area of your body for a procedure (like an IV start or listening to your baby's heart).
- Use warmed bags of IV fluids.
- Keep the room temperature at a warm and comfortable level.
- Use a special blanket that provides warmed, forced-air flow on your body when we are able.
- Monitor your temperature.

In the Recovery Room

- Your baby will stay in Kangaroo Care for the entire Recovery Room stay if desired.
- Your nurse will monitor your vital signs and ask you questions about sensation returning to your body. It can take up to 2-4 hours for spinal anesthesia to wear off completely.
- If you are not nauseous you may have clear liquids and crackers. You will progress quickly to your normal diet if you tolerate clear liquids well.
- If you received general anesthesia, the surgeon will talk with your family to let them know how you are.
- One person can stay with you in the recovery room, if you would like. Once you are moved to a regular room, you can have additional visitors.
- You will move from Recovery to a room on the Postpartum unit when:
 - Your vital signs have returned to levels close to what they were before surgery
 - The spinal anesthesia has worn off
 - You are not experiencing any complications that may require closer monitoring
- Most women stay in the Recovery Room for 90 minutes to 2 hours before transitioning to a regular room.

Your Room on the Postpartum Floor

- If you are feeling up to having visitors, your family can visit you and your support person in your room. Please remember that you will be tired, and your focus should be on you and your new baby. It is ok to ask people to come back after you have had a chance to rest and to bond alone with your newborn.
- If you are not having nausea, your nurse can order a tray for you to eat.
- Once the spinal anesthesia wears off and your nurse says it is safe, you will be able to sit on the edge of the bed and later, sit in a chair. Please remember to ask for the nurse for help the first time you get out of bed.
- Soon after surgery, you will be asked to take a walk outside your room in a loop around the nurse's station while someone watches your baby for you. Walking as soon as possible after surgery reduces pain, promotes healing, and stimulates bowels that can get sluggish from pain medication.
- Once you are moving around well, the urinary catheter can be removed.

Managing Surgical Pain

Because you have had a major abdominal surgery, you can expect to experience some pain. We will help you manage your surgical pain to keep it at a tolerable level in several ways:

- You will use a pain scale of 1 through 10 to communicate pain levels with your nurses: 1-3 is little pain, 4-6 is moderate pain, and 7-10 is severe pain.
- You will be provided with non-narcotic pain medications around the clock. These will be brought to you on a regular schedule to prevent pain levels from climbing to more uncomfortable levels. The more you are able to stay on a regular schedule of these non-narcotics, the fewer narcotic pain medications you will need.
- Your nurse can bring you warm packs for minor discomfort.
- If you are experiencing higher levels of pain, some narcotic pain medication can be provided. The goal is to use as few narcotics as possible, to decrease the possibility of side effects, as well as to minimize addiction potential. But if they are used as prescribed, they can be safely used for additional pain relief.



Massaging Sequential Compression Device

Wear your compression socks at ALL TIMES, except when walking!

Wearing compression socks prevents blood clots which can be dangerous and detrimental to your recovery.

Incentive Spirometer / Cough and Deep Breathing

Use the incentive spirometer to do breathing exercises frequently throughout the day. This helps expand your lungs and prevent pneumonia that can occur with major abdominal surgery.

Caring for your baby while you are in the hospital

- Your baby will be “rooming in” with you. This allows you to interact with your baby as you would at home and allows you to more easily provide Kangaroo Care and breastfeeding. Let your nurse know if you are feeling uncomfortable caring for your baby; we are happy to help you and your baby learn together!
- Breastfeeding is encouraged because of the significant benefits it has for both mom and baby. It is normal for some moms and babies to have difficulty with breastfeeding at first. A lactation consultant will visit you to answer any questions you may have and help you with the breastfeeding process.



Going Home

You will go home when you...

- Have controlled nausea and vomiting
- Are walking
- Are passing gas or had a bowel movement
- Have your pain controlled with oral pain meds
- Are not experiencing excessive bleeding or other complications

Recovery at Home

Wound Care

Your surgical incision may be slightly red and tender or have some bruising which is expected. Most women undergoing cesarean delivery have stitches under the skin that dissolve on their own and do not need to be removed. Your top layer of skin may be closed with surgical glue. You can shower as normal but do not “pick” the glue off. Instead, leave it in place until your first post-surgical visit to your doctor. If you have a dressing or wound closure different than this, your nurse will provide you with special instructions on how to care for this at home, prior to discharge.

Vaginal Health

You can expect vaginal bleeding for up to 6 weeks. Do not put anything in your vagina for six weeks. Please be aware that it is still possible to become pregnant even if you are breastfeeding and not having a menses. If you have not yet decided on a contraception method and your surgeon said it is ok to resume sexual intercourse, use a condom.

Activity

It is ok to walk around the house and go up and down the stairs. However, avoid activity that puts pressure and pain on your abdomen. **Do not lift anything heavier than your baby until your surgeon tells you it is ok.** Avoid driving until you are no longer taking narcotic pain medications.

Fatigue

Fatigue is common after surgery and you may find that you need to take extra naps. If you are able, sleep when your baby sleeps. Being tired after giving birth, especially with a surgical delivery, is normal. You will slowly build your strength back in a few weeks.

Bathing

You may shower as permitted by your surgeon. Do not soak in a tub for two weeks after your surgery.

When to call your obstetrician:

- You have heavier than normal vaginal bleeding that soaks a pad in 1 hour or if you are passing large clots.
- You have a fever higher than 100.5.
- Your wound is red, hot, open, or is draining pus, yellow or greenish fluid.
- You are vomiting, have severe diarrhea, or can't keep fluid down.
- If you have lower leg swelling, or calf pain.
- You are unable to urinate.
- You have not had a bowel movement by day four after delivery.
- You are having symptoms such as extreme fatigue, sadness, or hopelessness. This may mean you are suffering from postpartum depression.

Don't forget to ask questions!

Your best chance of success is understanding all the steps to recovery before you head home.

Patient Name: _____

Surgeon Name: _____

✓ When Done	Actions to Take BEFORE Surgery	
1 – 2 Weeks Before Surgery		
	Preop Appointment	Have your preoperative appointment with your surgeon. Complete consent forms, go over your home medications and discuss the type of anesthesia you will have.
	Phone Call from Anesthesia	Receive phone call from the Anesthesia office to remind you what time to arrive for your surgery, review medications to take the day of surgery, go over health history and answer last-minute questions.
One Day Before Surgery		
	Eat normally the day before surgery, with a light snack later in the evening.	
	The night before your surgery, shower and use the soap (½ the bottle) following the instructions for proper use. Use clean sheets and clean pajamas.	
	Eat nothing after midnight. You may continue to have small amounts of clear liquids until 3 hours prior to your surgery.	
Morning of Surgery		
	Take medications as instructed. Clear liquids ONLY until 3 hours prior to surgery.	
	Shower and use the other ½ of the bottle of soap. Dress in clean clothes.	
	Remember to bring your hospital bag, medication list and this booklet with you.	

✓ When Done	Actions to take RIGHT AFTER Surgery	
	Mobility	4-6 hours after your surgery is over, WITH HELP, sit on the edge of the bed, try to take a few steps, and sit in a chair. Wear your sequential compression device (SCD) when in bed. Walk around the nursing loop before bed.
	Incentive Spirometer	Continue to use this device to do deep breathing exercises frequently throughout the day to keep your lungs open and clear.
	Diet	Start taking sips of clear liquids, if you have no nausea, soon after surgery. You may begin eating as soon as you feel up to it.
	Pain management	Scheduled medications will be given to you to manage your pain. If you are concerned about pain, talk with your nurse.
	Urinary catheter	This will be removed within 6 hours of surgery, as long as you are walking.

✓ When Done	Actions to Take the FIRST Day After Surgery	
	Mobility	Spend at least 4 hours out of bed. (Eat your meals in the chair) Walk at least 3 to 6 times in hallway. Wear your sequential compression device (SCD) when in bed.
	Incentive Spirometer	Continue to use this device to do deep breathing exercises frequently throughout the day to keep your lungs open and clear.
	Diet	Eat a well-balanced diet. Talk to your nurse if you are having nausea.
		You will be disconnected from the intravenous fluids if you are drinking well. Ask your nurse if this has not been done.
	Pain management	Scheduled medications will be given to you to manage your pain. If you are concerned about pain, talk with your nurse.
	Urinary catheter	Your urinary catheter will be removed if not already done. Please ask your nurse if not addressed.
✓ When Done	Actions to Take the SECOND Day After Surgery	
	Mobility	Spend at least 6 hours out of bed. Walk in the hallway at least 3-6 times. Wear your sequential compression device (SCD) when in bed.
	Incentive Spirometer	Continue to use this device to do deep breathing exercises frequently throughout the day to keep your lungs open and clear.
	Diet	Eat a well-balanced diet. Talk to your nurse if you are having nausea.
	Discharge Planning	You are ready to be discharged if you are drinking/eating well (no nausea), passing gas, and your pain is well controlled.
		Talk to your nurse about what you can expect for normal postpartum bleeding, signs and symptoms of infection, and what to do if you think you have an infection.
		You may go home with new prescriptions or changes to your home medications. Make sure you go through them with your nurse and understand the instructions regarding these medications. We will go over many topics about how to care for yourself and your baby during your stay. You will be provided with videos to watch in your room and you will be sent home with a teaching booklet.

Thank you for choosing us for your surgery.

Please let us know if there is anything you need to be more comfortable.