Living Kidney Donor

Last Updated: 10/29/24

INCLUSION CRITERIA

- Hand-assisted laparoscopic donor nephrectomy

EXCLUSION CRITERIA

- Open nephrectomy

MEASURES

- Length of stay
- Order set utilization
- Average/median pain score
- Morphine Milligram Equivalents (MME)
- Unplanned Emergency Department Returns
- Readmission rate

ON-CALL SCHEDULE

- 7a-6p Transplant Team
- 6p-7a Gen Surg Team

DISCHARGE CRITERIA[1]

- Adequate pain control
- Pass flatus/bowel movement
- Afebrile
- Tolerate liquid diet

Preoperative Outpatient Services

- **7-14 days Pre Op**: Obtain final crossmatch, infectious disease panel , and urine drug screen. Patient meets with Independent Living Donor Advocate (ILDA), living donor coordinator, social work, and nutrition
- **1 day Pre Op**: Patient to intake clear liquids only
- **Night before**: Drink 8 ounces of Ensure; no solids after midnight
- **1 hour before scheduled arrival time**, patient drink 20 ounces of Gatorade (orange or yellow only)

Lab results acceptable? — Yes → Pre Op, Day 0; No → **Transplant surgeon clears patient?**

Transplant surgeon clears patient? — Yes → Pre Op, Day 0; No → **Reschedule Nephrectomy**

Pre Op, Day 0

- Administer Enoxaparin, Acetaminophen, Gabapentin
- Obtain type and screen CMP, CBC, PT/PTT, donor storage blood

Lab results acceptable? — Yes → Nephrectomy Performed; No → **Surgery/ anesthesia clear patient?**

Surgery/ anesthesia clear patient? — Yes → Nephrectomy Performed; No → **Reschedule Nephrectomy**

Nephrectomy Performed

Post Op, Day 0

- Start clears only, IV fluids 125 ml/hour
- Elevate head of bed 30 degrees at all times
- Ambulate 1x/day when on the floor; Pneumatic pressure stockings in bed. TED stocking when out of bed.
- Initiate incentive spirometer 10x/hr while awake
- Monitor foley catheter urine output hourly
- Start bowel regimen (Polyethylene Glycol, Docusate, and Senna)
- Consult Pain Team for post-op pain management

Post Op, Day 1

- Remove foley catheter in a.m.
- Stop IV fluids; encourage fluid intake of 2-3 liters while awake
- Start bland diet and advance to regular diet as tolerated
- Ambulate 4x/day; calf raises 2x/day
- Continue administration of Enoxaparin, Acetaminophen
- Obtain CMP, CBC, magnesium and phosphorous labs daily
- Consult ILDA, social worker, pharmacist, living donor coordinator, and nutritionist

⚠ **Temperature ≥38.3°C**

- Contact Provider On-call
- Order chest xray, 2 view
- Send UA & Urine culture

Post Op, Day 2

- Encourage intake of 2-3 liters of fluid daily
- Ambulate 4x/day; calf raises 3 x/day
- Obtain UA, urine protein/creatinine ratio
- Consult ILDA, social worker, pharmacist, living donor coordinator, and nutritionist for discharge planning

Ready for Discharge? — Yes → **Discharge If Meets Criteria[1]**; No → **Post Op, Day 2+**

Discharge If Meets Criteria[1]

- Take Stool softeners for daily bowel movement
- Ambulate 4-5x/day
- Contact Jefferson surgical team with questions
- Follow-up with Jefferson surgeon in 7-10 days

Post Op, Day 2+
Additional medical management as needed

Medications		
Medication	Route	Dose
Enoxaparin	Sub-Q	40mg Daily
Acetaminophen	Oral	1000mg PRN (Max dose 4000 mg/day)
Gabapentin	Oral	300mg Once Pre op
Polyethylene glycol	Oral	17g: Daily
Docusate sodium	Oral	150mg BID
Senna	Oral	8.6mg BID

Abbreviations			
Abbreviation	**Terminology**	**Abbreviation**	**Terminology**
BID	Twice daily	**Post Op**	Post Operative
CBC	Complete Blood Count	**PRN**	As needed
CMP	Complete Metabolic Panel	**PT/PTT**	Prothrombin Time/ Partial Thromboplastin Time
Cr	Creatinine	**Q**	Every
F/u	Follow-up	**Sub-Q**	Subcutaneous
g	Grams	**TED**	Thrombo-Embolic Deterrent
IV	Intravenous	**UA**	Urinalysis
kg	Kilograms		
mg	Milligrams		
ml	Milliliter		
NSAID	Nonsteroidal Anti-inflammatory Drug		
OR	Operating room		
Pre Op	Pre Operative		

Disclaimer: The clinical pathways are based upon publicly available medical evidence and/or a consensus of medical practitioners at Nemours Children's Health ("Nemours") and are current at the time of publication. These clinical pathways are intended to be a guide for practitioners and may need to be adapted for each specific patient based on the practitioner's professional judgment, consideration of any unique circumstances, the needs of each patient and their family, and/or the availability of various resources at the health care institution where the patient is located.

VERSION MANAGEMENT

- Version 1.0 (10/29/2024): Go Live.

Questions about this pathway should be directed to **clinicalpathways@nemours.org**.

AUTHORS & REFERENCES

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- Enhanced recovery after surgery recommendations for renal transplant: guidelines. Br J Surg. 2022 Dec 13;110(1):57-59. doi: 10.1093/bjs/znac325.
- Feasibility, Safety and Efficacy of Enhanced Recovery After Living Donor Nephrectomy: Systematic Review and Meta-Analysis of Randomized Controlled Trials. J Clin Med. 2020 Dec 23;10(1):21. doi: 10.3390/jcm10010021.
- OPTN Organ Procurement and Transplantation Network, Effective 5/2/24. Policy 14: Living Donation p271-292. Document accessed from the following website: Policies - OPTN (hrsa.gov)