Current Status: Pediatric Intestinal Transplantation Program

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Disclosures

Consultant: Mirum Pharmaceutical, Inc.

Multidisciplinary Team (Since 1990)

- Transplant Surgeons (5)
- Pediatric Transplant Hepatologists (5)
- Transplant/IRP Coordinators (3/3)
- Nurse Practitioners (3)
- Transplant/IRP Clinical Dietitian (1/3)
- Transplant Pedi PharmD (3)
- Psychologist, Social Worker, Nurses, Child Life Specialist, Financial counselor.

* Others specialties – i.e. ID, Heme/Onc, Renal, etc.

Variations of Intestinal Transplantation

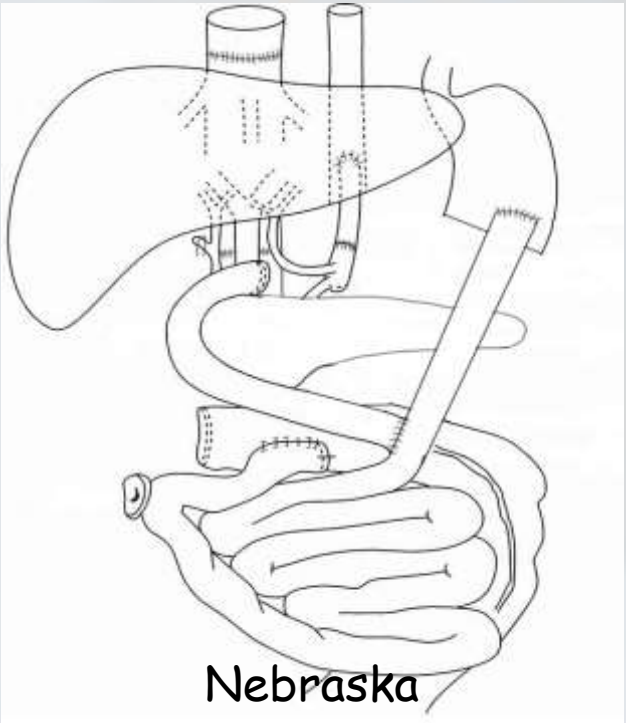
- Isolated Intestinal Transplantation

- Multi-visceral:

Intestine-Liver-Pancreas

Intestine-Liver-Pancreas-Colon

Intestine-Liver-Pancreas-Kidney



OPTN/SRTR 2023 SBTx/LSBTx Volume

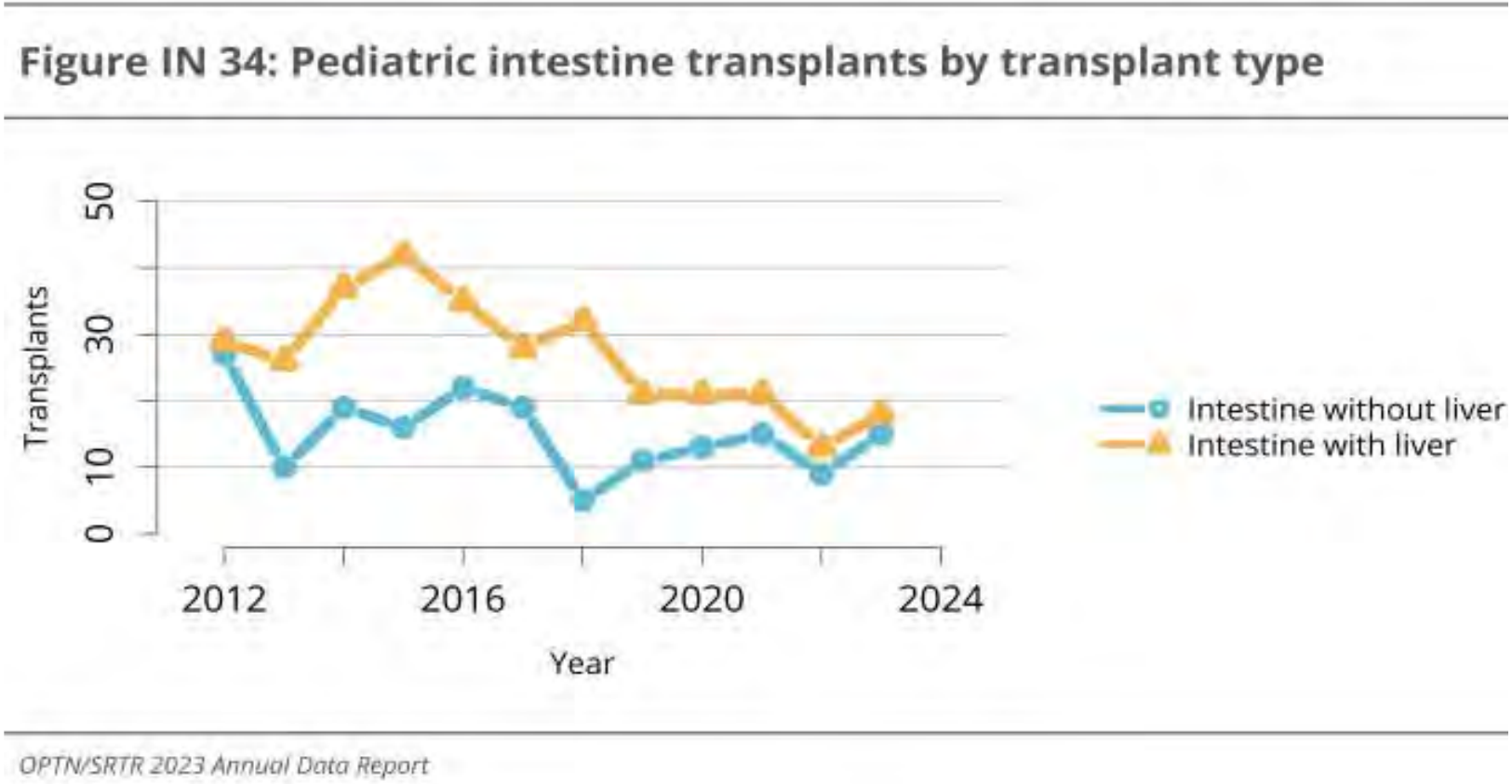
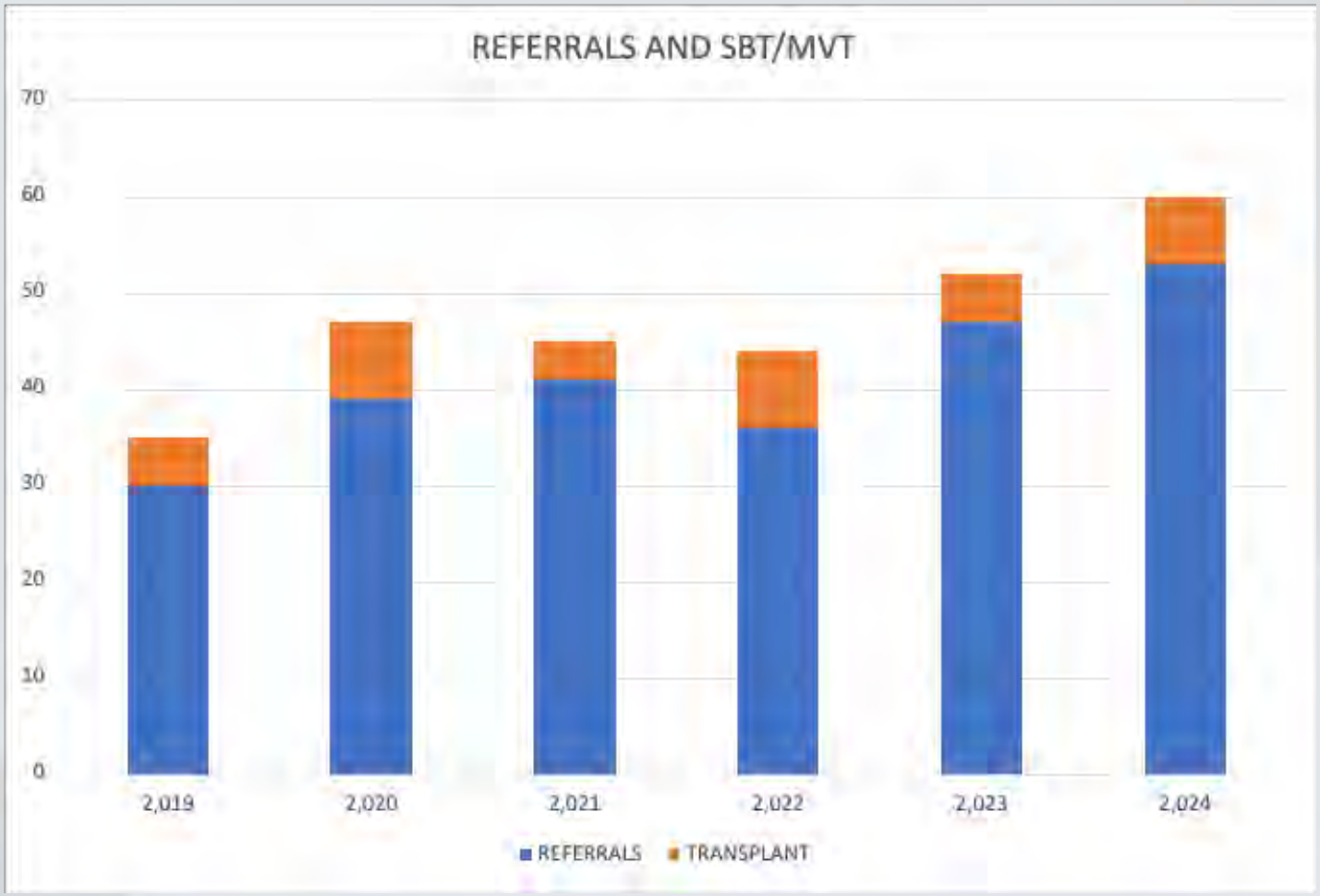


Figure IN 34: Pediatric intestine transplants by transplant type. Pediatric intestine transplant recipients, including retransplant and multiorgan recipients.

Isolated SB & MVT at UNMC

	2019	2020	2021	2022	2023	2024
ISB	2	1	1	4	1	1
L/SB/P	3	5	3	4	3	5
L/SB/P/K	0	2	0	0	1	1
TOTAL	**5**	**8**	**4**	**8**	**5**	**7**

Intestinal Failure Referrals vs SBT & MVT at UNMC



Where the referrals came from
2022-2024

Nebraska
Iowa
Colorado
Kansas
Texas
Missouri
Oklahoma
New Mexico
Alabama
Oregon

Mississippi
South Dakota
Washington
Arizona
Louisiana
Minnesota
North Carolina
New York
Hawaii
Utah

Complications

SURGICAL (~10-15%)

- Bleeding, anastomotic leaks, thrombosis, SB perforation/fistula

MEDICAL

- Infections (1st cause of Death)
- Acute rejection (20-50% down from 85% in the 90's)
- PTLD (10-15%)
- GVHD (5-10%)
- Antibody mediated rejection (in SBT/MVT past 10 y)

- Long-term – Chronic SB allograft rejection
  Chronic renal failure

SBT/MVT Graft Survival (OPTN/SRTR 2023)

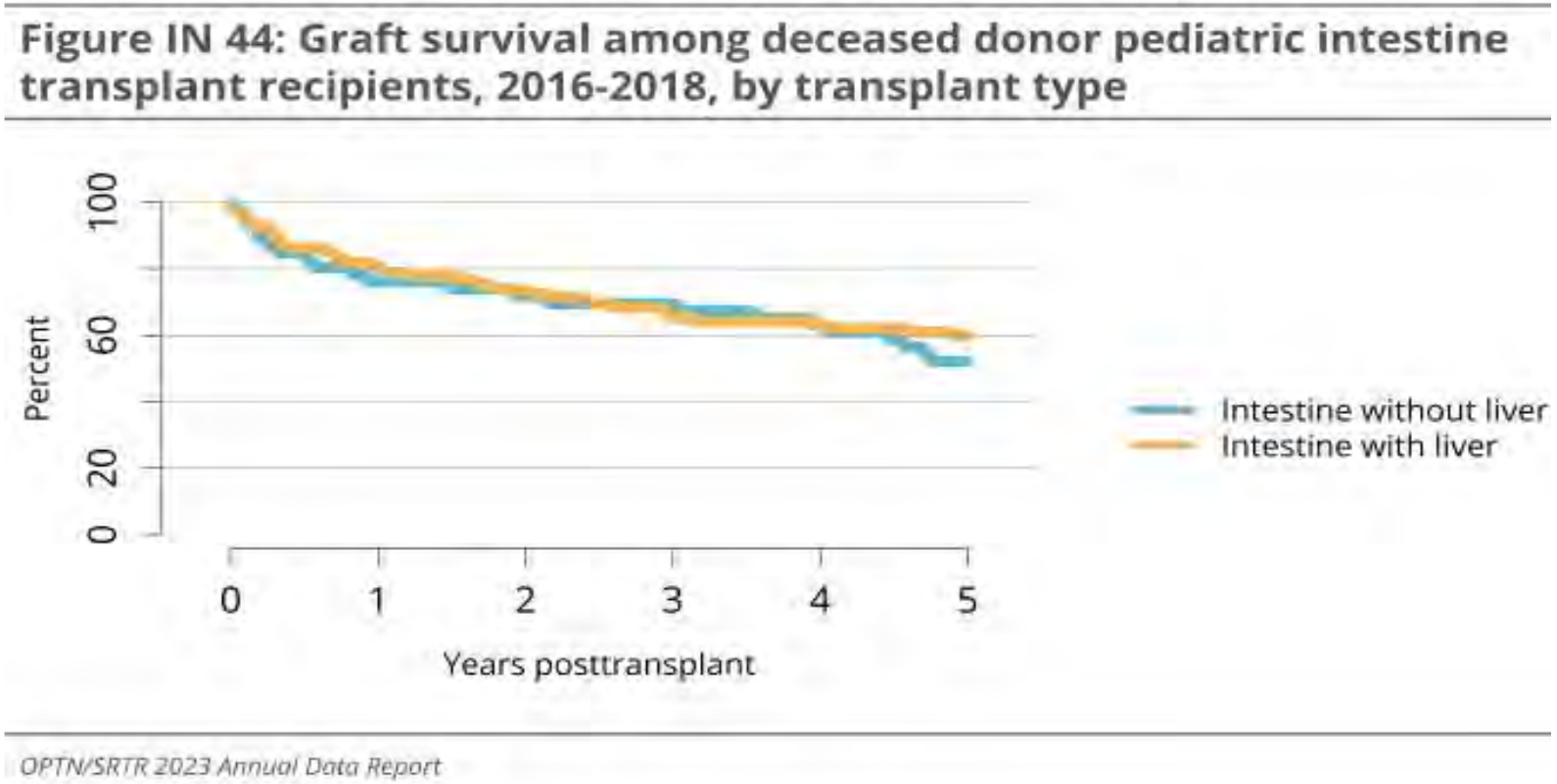


Figure IN 44: Graft survival among deceased donor pediatric intestine transplant recipients, 2016-2018, by transplant type. Intestine graft survival estimated using unadjusted Kaplan-Meier methods.

SBT/MVT Patient Survival (OPTN/SRTR 2023)

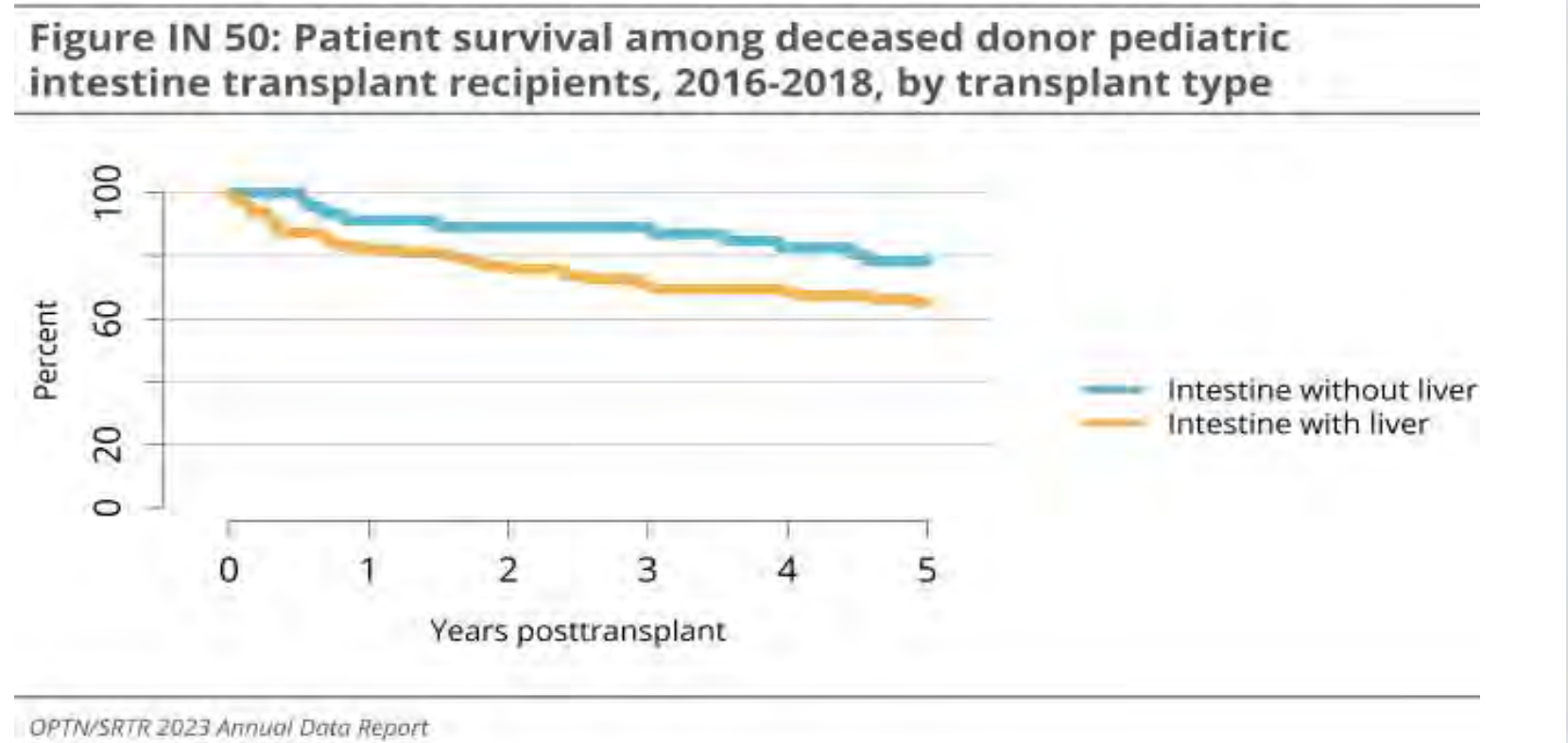


Figure IN 50: Patient survival among deceased donor pediatric intestine transplant recipients, 2016-2018, by transplant type. Patient survival estimated using unadjusted Kaplan-Meier methods.

***UNMC – 1-year survival – 88%. 3-year survival – 75%**

Research/Publications – UNMC 2021-2024

- Long-term nutritional outcome in SBT/MVT
- Ileoscopy screening in SBT/MVT
- Evaluation of monitoring DSA in SBT/MVT
- GH Therapy in pediatric SBT/MVT recipients
- Valganciclovir in CMV infections in Pedi SBT/MVT
- Liver Fibrosis in Pedi SBT/MVT recipients

Future

1. SBT/MVT volumes will remain low – success of intestinal rehabilitation.
2. Non-invasive markers to monitor and early dx of rejection.
3. OPTN/SRTR data, no major changes in graft/patient survival for >10 years. Targeted immunosuppression to better balance prevention of rejection vs risk for infections/PTLD.
4. “Antibody mediated rejection” - DSA vs Bx findings.
5. Chronic intestinal allograft rejection - diagnosis and prevention

THANKS