

Database Name Database Vendor <i>Dates of coverage</i>	Search strategy Publication date filter: 2005-2019
PubMed U.S. National Library of Medicine 1946 – Present	<p>((Infant[Mesh] OR Child[Mesh] OR Adolescent[Mesh] OR Minors[Mesh] OR Pediatrics[Mesh] OR postnatal OR newborn OR newborns OR infant OR infants OR baby OR babies OR toddler OR toddlers OR child OR children OR kid OR kids OR juvenile OR juveniles OR youth OR youths OR young OR girl OR girls OR boy OR boys OR preadolescent OR preadolescents OR pre-adolescent OR pre-adolescents OR preteen OR preteens OR pre-teen OR pre-teens OR puberty OR prepuberty OR pubescent OR prepubescent OR adolescent OR adolescents OR teen OR teens OR teenager OR teenagers OR pediatric OR pediatrics OR paediatric OR paediatrics)</p> <p>AND</p> <p>((live OR living) AND (donor OR donors OR donation OR "Tissue Donors"[Mesh])) OR "Living Donors"[Mesh])</p> <p>AND</p> <p>((deceased OR cadaveric OR cadaver OR "Cadaver"[Mesh]) AND (donor OR donors OR donation OR "Tissue Donors"[Mesh]))</p> <p>AND</p> <p>((liver OR hepatic OR "Liver"[Mesh]) AND (transplant* OR graft* OR allograft* OR allotransplant* OR homotransplant* OR hepatectomy OR hepatectomies OR resection* OR lobectomy OR lobectomies OR segmentectom* OR "Transplantation"[Mesh] OR "Transplants"[Mesh] OR "Hepatectomy"[Mesh])) OR "Liver Transplantation"[Mesh]))</p> <p>OR</p> <p>(LDLT AND DDLT)</p>
Embase & Embase Classic Elsevier 1947 – Present	<p>((minor (person)/exp OR 'pediatrics'/exp OR 'juvenile'/exp OR 'adolescence'/exp OR postnatal OR newborn OR newborns OR infant OR infants OR baby OR babies OR toddler OR toddlers OR child OR children OR kid OR kids OR juvenile OR juveniles OR youth OR youths OR young OR girl OR girls OR boy OR boys OR preadolescent OR preadolescents OR pre-adolescent OR pre-adolescents OR preteen OR preteens OR pre-teen OR pre-teens OR puberty OR prepuberty OR pubescent OR prepubescent OR adolescent OR adolescents OR teen OR teens OR teenager OR teenagers OR pediatric OR pediatrics OR paediatric OR paediatrics)</p> <p>AND</p> <p>((live OR living) AND (donor OR donors OR donation OR 'donor'/exp)) OR 'living donor'/exp)</p> <p>AND</p> <p>((deceased OR cadaveric OR cadaver OR 'cadaver'/exp) AND (donor OR donors OR donation OR 'donor'/exp)) OR 'cadaver donor'/exp)</p> <p>AND</p> <p>((liver OR hepatic OR 'liver'/exp) AND (transplant* OR graft* OR allograft* OR allotransplant* OR homotransplant* OR hepatectomy OR hepatectomies OR resection* OR lobectomy OR lobectomies OR segmentectomy OR segmentectomies OR 'transplantation'/exp OR 'lobectomy'/exp OR 'segmentectomy'/exp)) OR ('liver transplantation'/exp OR 'liver resection'/exp))</p> <p>OR</p> <p>(LDLT AND DDLT)</p>
Cochrane Library Wiley <i>Cochrane Database of Systematic Reviews (1995–present)</i> <i>Cochrane Central Register of Controlled Trials (1898–present)</i>	<p>#1 live</p> <p>#2 living</p> <p>#3 #1 or #2</p> <p>#4 donor donors</p> <p>#5 donation</p> <p>#6 MeSH descriptor: [Tissue Donors] explode all trees</p> <p>#7 #4 or #5 or #6 or #7</p> <p>#8</p>

#9	#3 and #8
#10	MeSH descriptor: [Living Donors] explode all trees
#11	#9 or #10
#12	deceased
#13	cadaveric
#14	cadaver
#15	MeSH descriptor: [Cadaver] explode all trees
#16	#12 or #13 or 14 or #15
#17	#16 and #8
#18	liver
#19	hepatic
#20	MeSH descriptor: [Liver] explode all trees
#21	#18 or #19 or #20
#22	transplant*
#23	graft*
#24	allograft*
#25	allotransplant*

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#26	homotransplant*
#27	hepatectomy
#28	hepatectomies
#29	resection*
#30	lobectomy
#31	lobectomies
#32	segmentectom*
#33	MeSH descriptor: [Transplantation] explode all trees
#34	MeSH descriptor: [Transplants] explode all trees
#35	MeSH descriptor: [Hepatectomy] explode all trees
#36	#22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35
#37	#21 and #36

- #38 MeSH descriptor: [Liver Transplantation] explode all trees
- #39 #37 or #38
- #40 MeSH descriptor: [Infant] explode all trees
- #41 MeSH descriptor: [Child] explode all trees
- #42 MeSH descriptor: [Adolescent] explode all trees
- #43 MeSH descriptor: [Minors] explode all trees
- #44 MeSH descriptor: [Pediatrics] explode all trees
- #45 postnatal
- #46 newborn
- #47 newborns
- #48 infant
- #49 infants
- #50 baby
- #51 babies
- #52 toddler
- #53 toddlers
- #54 child
- #55 children
- #56 kid
- #57 kids
- #58 juvenile
- #59 juveniles
- #60 youth
- #61 youths
- #62 young
- #63 girl
- #64 girls
- #65 boy
- #66 boys
- #67 preadolescent

- #68 preadolescents
- #69 pre-adolescent
- #70 pre-adolescents
- #71 preteen
- #72 preteens
- #73 pre-teen
- #74 pre-teens
- #75 puberty
- #76 prepuberty
- #77 pubescent
- #78 prepubescent
- #79 adolescent
- #80 adolescents
- #81 teen
- #82 teens
- #83 teenager
- #84 teenagers
- #85 pediatric
- #86 pediatrics
- #87 paediatric
- #88 paediatrics
- #89 #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57 or #58 or #59 or #60 or #61 or #62 or #63 or #64 or #65 or #66 or #67 or #68 or #69 or #70 or #71 or #72 or #73 or #74 or #75 or #76 or #77 or #78 or #79 or #80 or #81 or #82 or #83 or #84 or #85 or #86 or #87 or #88 #90 #11 and #17 and #39 and #89
- #91 LDLT
- #92 DDLT
- #93 #91 and #92
- #94 #90 or #93

Web of Science Core Collection
Clarivate Analytics
Science Citation Index Expanded (1900-present)
Social Sciences Citation Index (1900-present)
Arts & Humanities Citation Index (1975-present)

((postnatal OR newborn OR newborns OR infant OR infants OR baby OR babies OR toddler OR toddlers OR child OR children OR kid OR kids OR juvenile OR juveniles OR youth OR youths OR young OR girl OR girls OR boy OR boys OR preadolescent OR preadolescents OR pre-adolescent OR pre-adolescents OR preteen OR preteens OR pre-teen OR preteens OR puberty OR prepuberty OR pubescent OR prepubescent OR adolescent OR adolescents OR teen OR teens OR teenager OR teenagers OR pediatric OR pediatrics OR paediatric OR paediatrics))

AND

((live OR living) AND (donor OR donors OR donation))

<p><i>Conference Proceedings Citation Index: Science (1990-present)</i> <i>Social Science & Humanities (1990-present)</i> <i>Book Citation Index: Science (2005-present)</i> <i>Social Sciences & Humanities (2005-present)</i> <i>Emerging Sources Citation Index (2015-present)</i> <i>Current Chemical Reactions (1985-present)</i> <i>Index Chemicus (1993present)</i></p>	<p>AND</p> <p>((deceased OR cadaveric OR cadaver) AND (donor OR donors OR donation))</p> <p>AND</p> <p>((liver OR hepatic) AND (transplant* OR graft* OR allograft* OR allotransplant* OR homotransplant* OR hepatectomy OR hepatectomies OR resection* OR lobectomy OR lobectomies OR segmentectomy OR segmentectomies)))</p> <p>OR</p> <p>(LDLT AND DDLT)</p>
<p>Clinicaltrials.gov U.S. National Library of Medicine</p>	<p>Advanced search</p> <p>Child (birth-17) filter</p> <p>Intervention box: ((live OR living) OR (deceased OR cadaveric OR cadaver)) AND ((donor OR donors OR donation) AND (liver OR hepatic) AND (transplant OR transplantation OR graft))</p>
<p>Google Scholar</p>	<p>(child OR pediatric OR paediatric) (live OR living) (deceased OR cadaveric OR cadaver) (donor OR donors OR donation) (liver OR hepatic) (transplant OR transplantation OR graft)</p>

Supplemental Table S1: Search Strategy. Date Last Searched: December 2, 2019.

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Author Year	1. Research Question	2. Study Population	3. Sample Size Justification	4. Groups recruited from the same population	5. Inclusion/Exclusion Criteria	6. Differentiation Between Cases and Controls	7. Random Selection	8. Use of Concurrent Controls	9. Exposure assessed prior to outcome measurement	10. Exposure measures and assessment	11. Blinding of exposure assessors	12. Statistical analysis	Total Score (out of 12)	Quality Rating (Good, Fair, or Poor)
	Yes (1), No(0), Other (CD, NR, NA)* **CD, cannot determine; NA, not applicable; NR, not reported"													
Aydogdu 2005	1	1	0	1	1	1	NA	1	1	1	0	0	8	Fair
Bahador 2009	0	1	0	1	1	1	NA	1	1	1	0	0	7	Fair
Chan 2009	1	1	0	1	1	1	NA	1	1	1	0	0	8	Fair
Darius 2014	1	1	0	1	1	1	NA	1	1	1	0	1	9	Good
Kehar 2019	1	1	0	1	1	1	NA	1	1	1	0	1	9	Good
Montenovo 2019	1	1	0	1	1	1	NA	1	1	1	0	1	9	Good
Oliveros 2005	1	1	0	1	1	1	NA	1	1	1	0	0	8	Fair
Szymczak 2018	1	1	0	1	1	1	NA	1	1	1	0	0	8	Fair
Tannuri 2016	1	1	0	1	1	1	NA	1	1	1	0	1	9	Good
Zhou 2010	1	1	0	1	1	1	NA	1	1	1	0	1	9	Good

Supplemental table S2: Quality Assessment Table

Supplemental methods S1:

When number of events or percentage were not directly presented in the study, data for patient and graft survival were extracted from Kaplan Meier curves using the Webplotdigitizer (<https://automeris.io/WebPlotDigitizer/>). Then, Observed minus Expected number of cases was calculated applying the following formulas:

$$I - E = \frac{O_1 - E_1}{n_1} - \frac{O_2 - E_2}{n_2} = \frac{O_1 - \frac{O_1 + O_2}{n_1 + n_2} \times n_1}{n_1} - \frac{O_2 - \frac{O_1 + O_2}{n_1 + n_2} \times n_2}{n_2}$$

Variance was calculated as:
$$V = \frac{O_1 - E_1}{n_1} + \frac{O_2 - E_2}{n_2}$$

For studies reporting the same number of patients in both LDLT and DDLT groups or

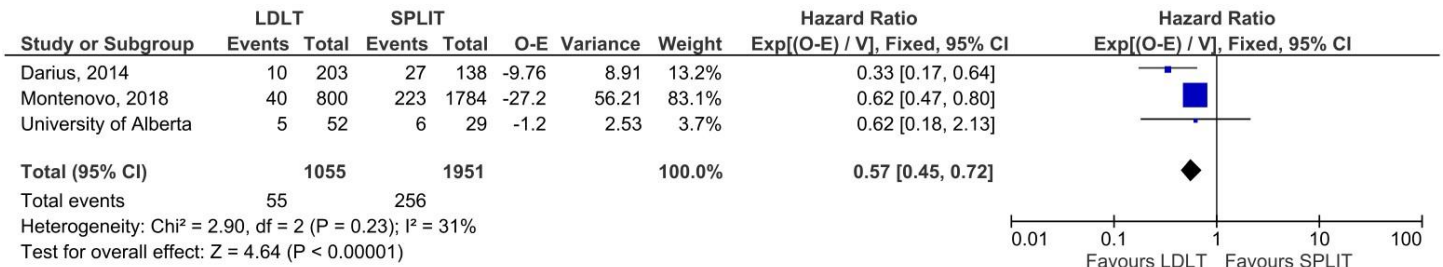
$$I - E = \frac{O_1 - E_1}{n} - \frac{O_2 - E_2}{n} = \frac{O_1 - E_1 - O_2 + E_2}{n}$$

Variance was calculated as
$$V = \frac{O_1 - E_1}{n} + \frac{O_2 - E_2}{n}$$

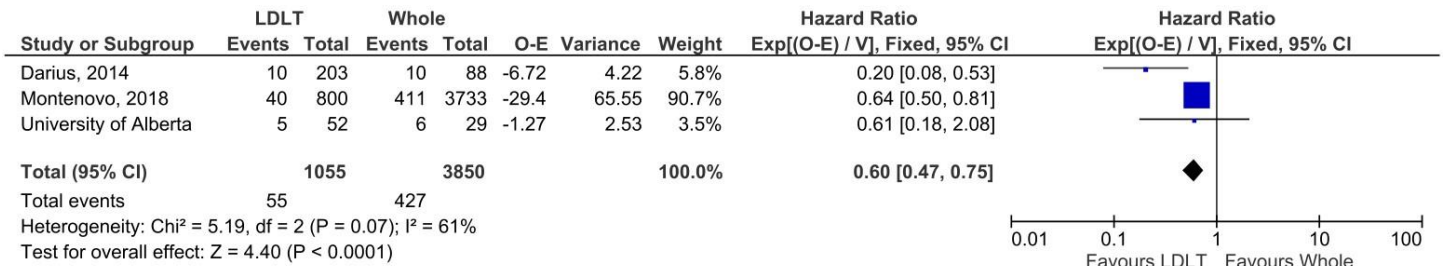
for studies with a different number of patients in LDLT and DDLT groups.

For example, in the study by Kehar et al., number of deaths at 1-year post-LT was 4 in the LDLT group out of 135 patients and 12 in the DDLT group out of 158, thus the resulting variance is 3,975. The z-score for the pvalue of 0.02= 2.33 thus the O-E= -4.6.”

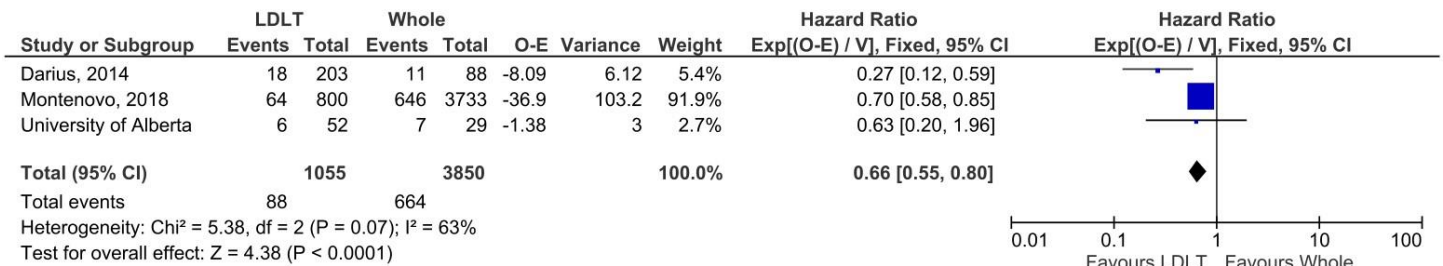
A. 1-year Graft Survival for LDLT vs Whole graft



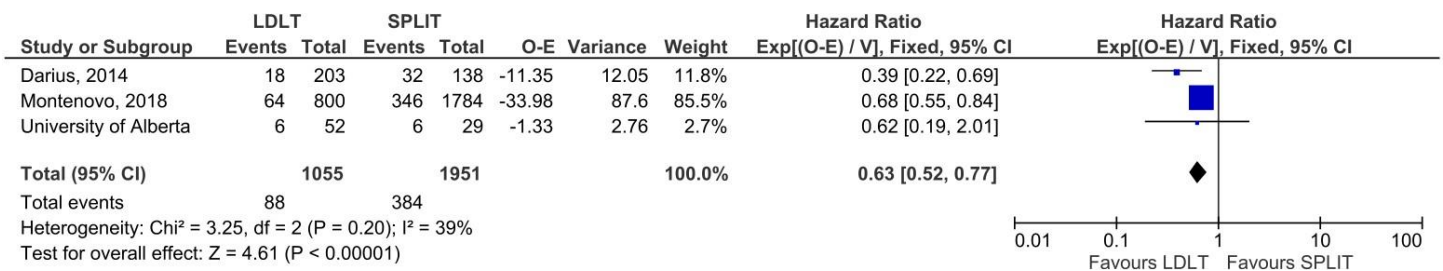
B. 1-year Graft Survival for LDLT vs Reduced deceased graft



C. 5-year Graft Survival for LDLT vs Whole graft

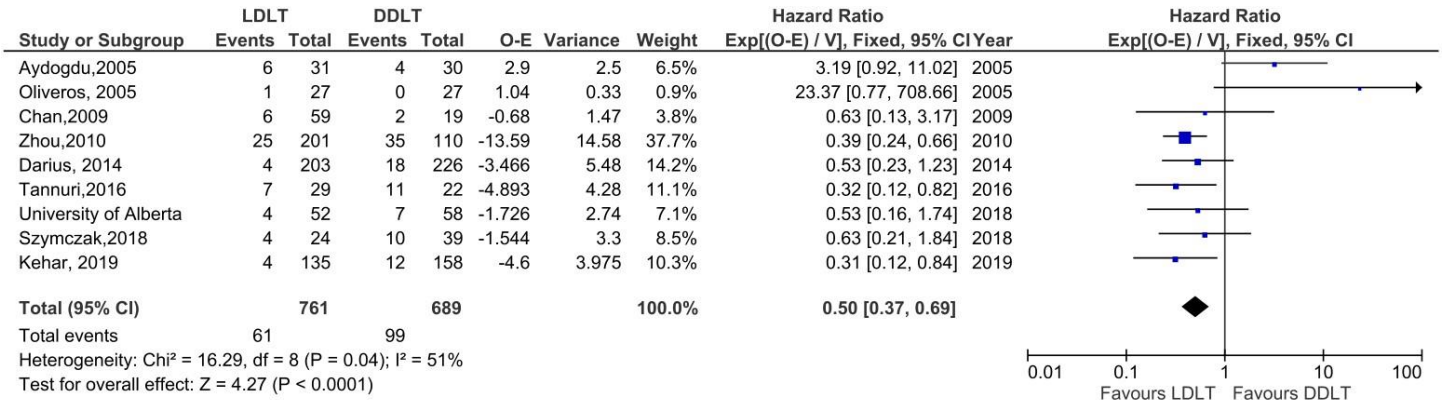


D. 5-year Graft Survival for LDLT vs Reduced deceased graft

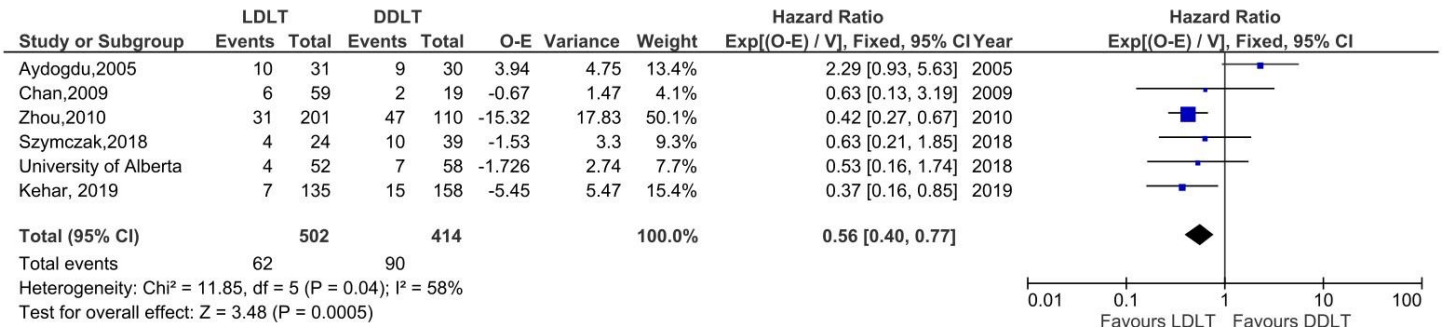


Supplemental Figure S1: Comparison of graft survival stratified by deceased donor graft type

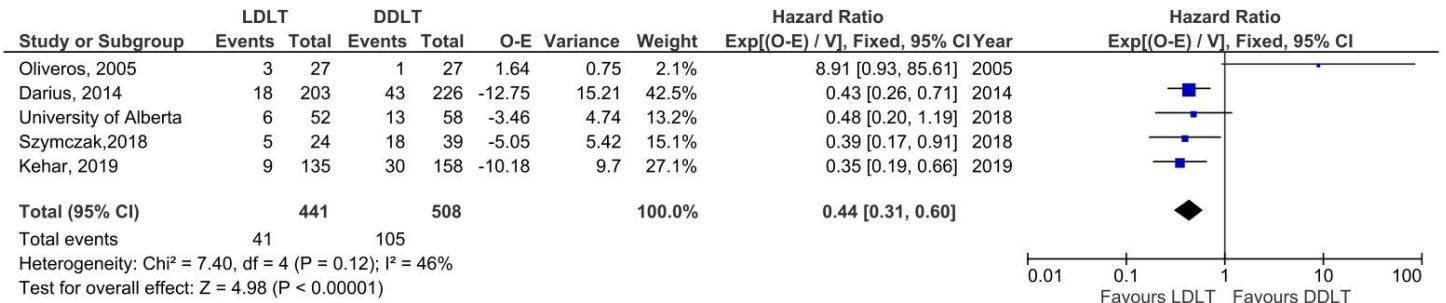
A. 1-year Patient Survival



B. 3-year Patient Survival

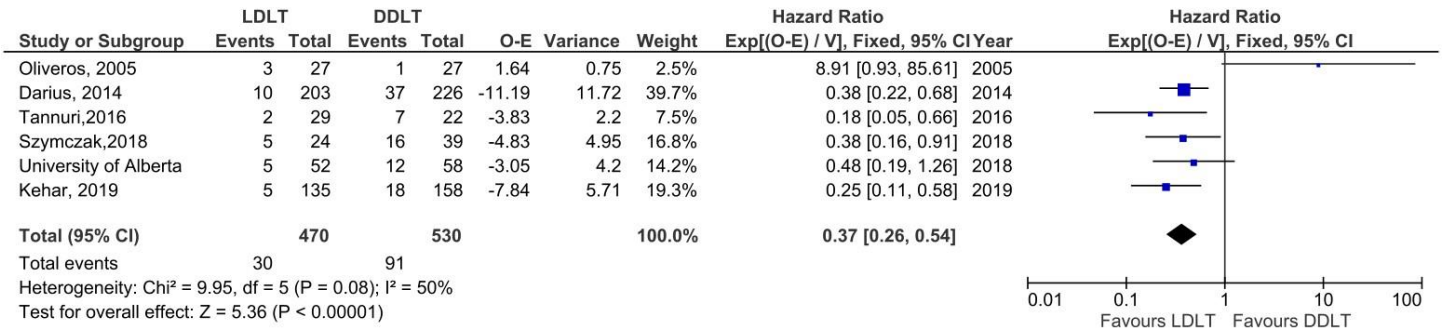


C. 5-year Patient Survival

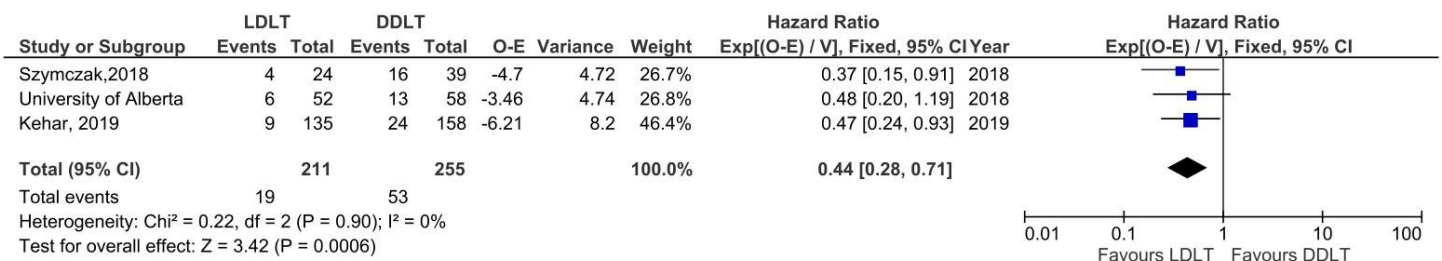


Supplemental Figure S2: Comparison of patient survival between LDLT and DDLT after removal of UNOS data

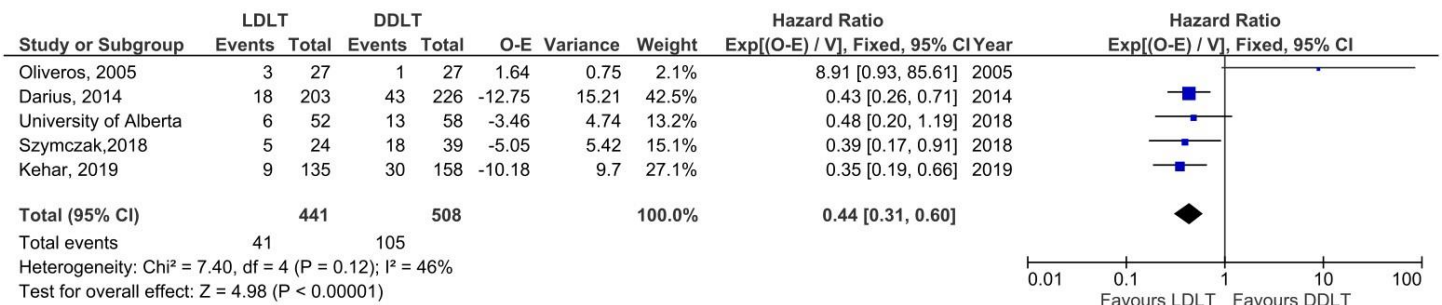
A. 1-year Graft Survival



B. 3-year Graft Survival



C. 5-year Graft Survival



Supplemental Figure S3: Comparison of graft survival between LDLT and DDLT after removal of UNOS data.