RELAPSE

Prospective study evaluating the treatment outcomes for localised recurrent, resectable retroperitoneal liposarcoma (ReLaPSe)

Approved in ANZSA

Email Angela Hong for documents angela.hong@sydney.edu.au



Updates in immunotherapy for soft tissue sarcoma

Christina L. Roland, MD, MS
Associate Professor of Surgical Oncology
Chief-Sarcoma Section, Vice Chair-Research

MDAnderson Cancer Center

Making Cancer History

Article

https://doi.org/10.1038/s43018-024-00726-z

A randomized, non-comparative phase 2 study of neoadjuvant immune-checkpoint blockade in retroperitoneal dedifferentiated liposarcoma and extremity/truncal undifferentiated pleomorphic sarcoma

Christina L. Roland © 114 M, Elise F. Nassif Haddad © 1.2.314, Emily Z. Keung © 1.14, Wei-Lien Wang © 4, Alexander J. Lazar © 4.5, Heather Lin⁶, Manoj Chelvanambi © 1, Edwin R. Parra © 7, Khalida Wani⁷, B. Ashleigh Guadagnolo⁸, Andrew J. Bishop⁸, Elizabeth M. Burton © 5, Kelly K. Hunt © 1, Keila E. Torres 1.5, Barry W. Feig 1, Christopher P. Scally 1, Valerae O. Lewis © 9, Justin E. Bird 9, Ravin Ratan 3, Dejka Araujo 3, M. Alexandra Zarzour 3, Shreyaskumar Patel 3, Robert Benjamin 3, Anthony P. Conley 3, J. Andrew Livingston © 3, Vinod Ravi 3, Hussein A. Tawbi © 10, Patrick P. Lin © 9, Bryan S. Moon 9, Robert L. Satcher 9, Bilal Mujtaba 11, Russell G. Witt 1, Raymond S. Traweek 1, Brandon Cope 1, Rossana Lazcano 7, Chia-Chin Wu © 5, Xiao Zhou 3, Mohammad M. Mohammad 5, Randy A. Chu 5, Jianhua Zhang © 5, Ashish Damania 5, Pranoti Sahasrabhojane 5, Taylor Tate 10, Kate Callahan 1, Sa Nguyen 1, Davis Ingram 7, Rohini Morey 7, Shadarra Crosby 7, Grace Mathew 7, Sheila Duncan 1, Cibelle F. Lima 7, Jean-Yves Blay © 2, Wolf Herman Fridman © 12, Kenna Shaw 13, Ignacio Wistuba 47, Andrew Futreal © 5, Nadim Ajami 5, Jennifer A. Wargo 1.5 & Neeta Somaiah © 3

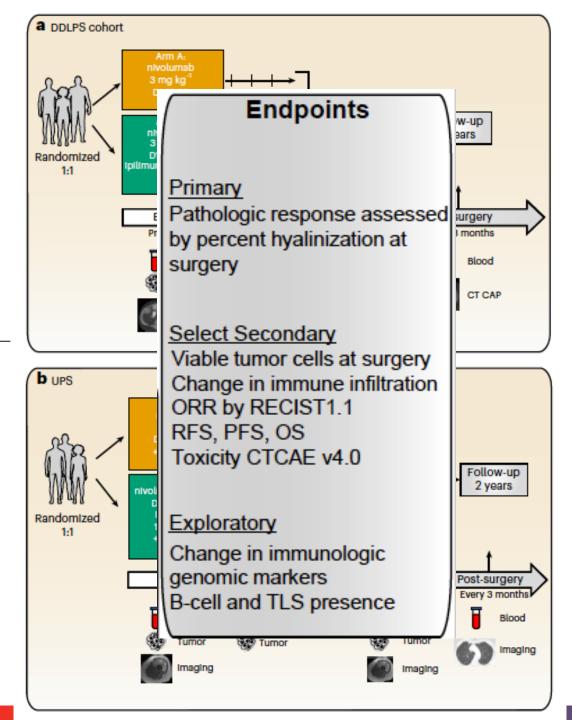
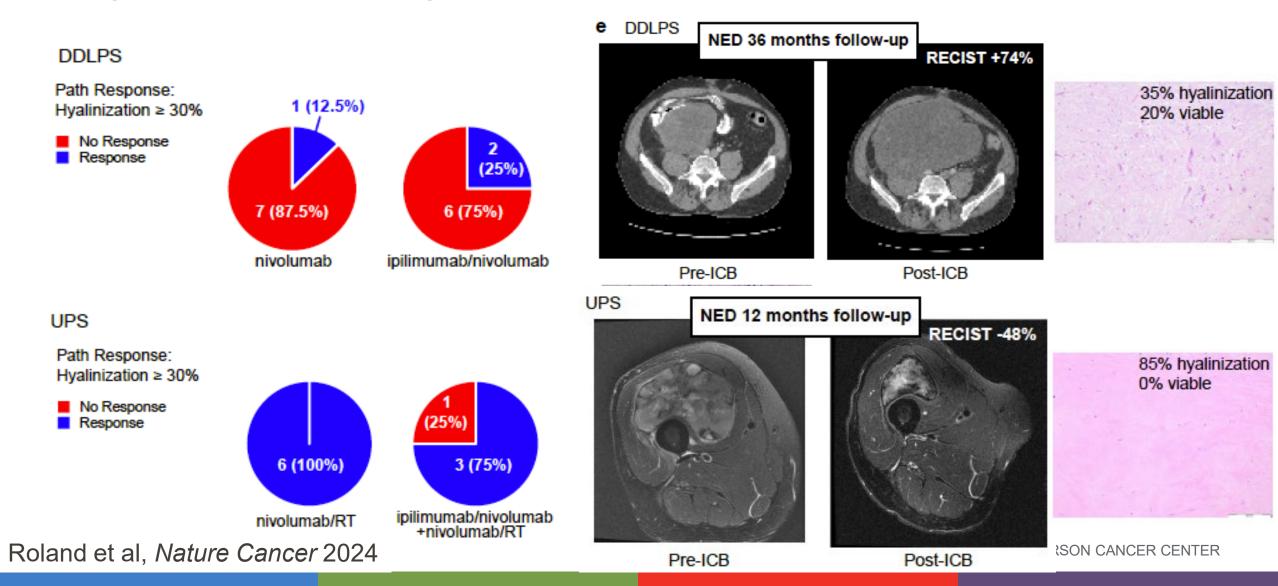


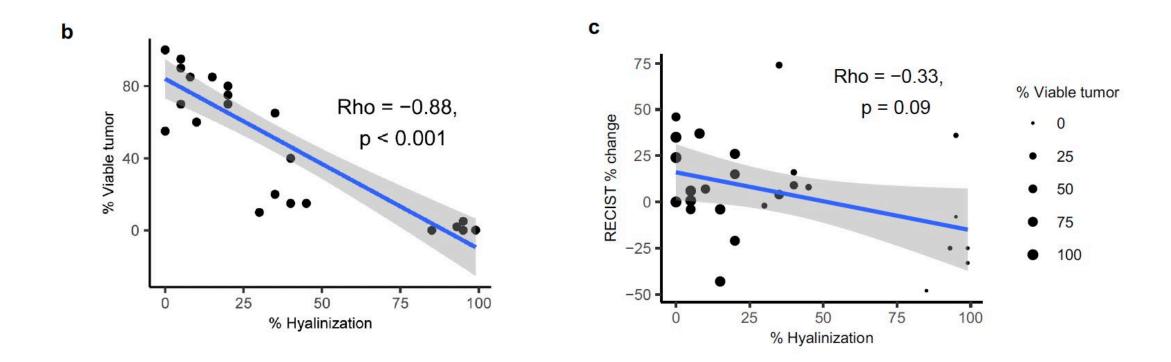
Table 2 | Patient characteristics at baseline and clinical end points by treatment group

Factor	Category	Retroperitoneal DDLPS			Extremity/trunk UPS		
		Overall, n=17	Nivolumab, n=8	Ipilimumab/ nivolumab, n=9	Overall, n=10	Nivolumab+nivolumab/ RT, n=6	Ipilimumab/ nivolumab+ nivolumab/RT, n=4
Race, n (%)	Other	1 (6%)	-	1 (11%)	-	-	-
	White	16 (94%)	8 (100%)	8 (89%)	10 (100%)	6 (100%)	4 (100%)
No. of previous resections, <i>n</i> (%)	0	6 (35%)	2 (25%)	4 (44%)	9 (90%)	5 (83%)	4 (100%)
	1	7 (41%)	4 (50%)	3 (33%)	-	-	-
	≥2	4 (24%)	2 (25%)	2 (22%)	1 (10%)	1 (17%)	-
No. of doses received, median (IQR)	1	3 (18%)	0	3 (33%)	1 (10%)	1 (17%)	0
	2	2 (11%)	1 (12%)	1 (11%)	2 (20%)	0	2 (50%)
	3	12 (71%)	7 (88%)	5 (56%)	0	0	0
	4	N/A	N/A	N/A	7 (70%)	5 (83%)	2 (50%)
Resection margins	RO	-	-	-	9 (90%)	5 (83%)	4 (100%)
	R1	-	-	-	1 (10%)	1 (17%)	0
	RO/R1	15 (88%)	6 (75%)	9	-	-	-
	R2ª	2 (12%)	2 (25%)	0	0	0	0
Sarculator OS, median % (IQR)⁵		23% (15, 38)	18 (13, 22)	31 (23, 46)	81% (79, 82)	80 (79, 86)	81 (78, 81)
Sarculator DFS, median % (IQR)°		2% (1, 14)	1% (0, 5)	10% (1, 14)			
Sarculator distant metastasis at 5 years, median % (IQR)					22% (20, 24)	22 (20, 34)	22 (20, 26)
Relapse: yes, n (%)		9 (53%)	5 (63%)	4 (44%)	3 (30%)	3 (50%)	0
First site of relapse	Locoregional	7 (42%)	5 (63%)	2 (22%)	0	0	0
	Distant	2 (12%)	0	2 (22%)	3 (30%)	3 (50%)	0

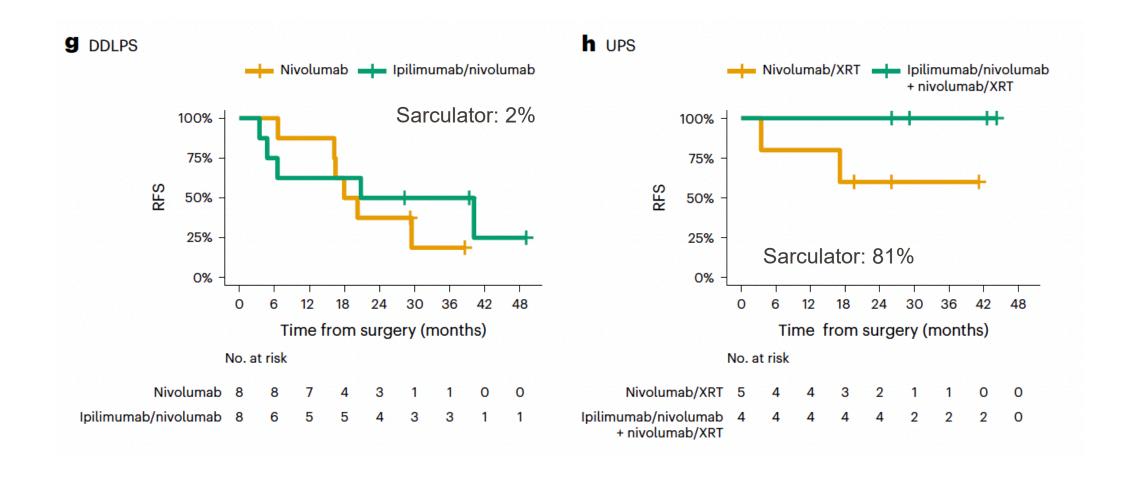
Significant Pathologic Response in UPS



No association between RECIST and path response



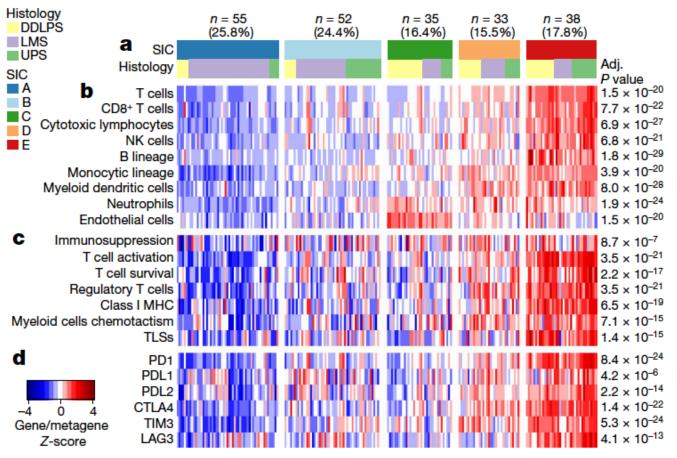
No association between RECIST and survival



No association between path response or PD-1 status and survival

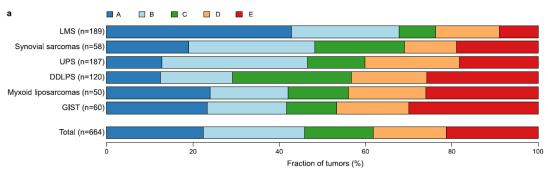
B cells are associated with survival and immunotherapy response in sarcoma

Florent Petitprez^{1,2,3,4}, Aurélien de Reyniès^{4,24}, Emily Z. Keung^{5,24}, Tom Wei-Wu Chen^{6,7,8,9}, Cheng-Ming Sun^{1,2,3}, Julien Calderaro^{1,10,11}, Yung-Ming Jeng^{9,12}, Li-Ping Hsiao⁷, Laetitia Lacroix^{1,2,3}, Antoine Bougoüin^{1,2,3}, Marco Moreira^{1,2,3}, Guillaume Lacroix^{1,2,3}, Ivo Natario^{1,2,3}, Julien Adam¹³, Carlo Lucchesi^{14,15}, Yec'han Laizet^{14,15}, Maud Toulmonde^{14,16}, Melissa A. Burgess¹⁷, Vanessa Bolejack¹⁸, Denise Reinke¹⁹, Khalid M. Wani²⁰, Wei-Lien Wang²⁰, Alexander J. Lazar^{20,21}, Christina L. Roland⁵, Jennifer A. Wargo^{5,21}, Antoine Italiano^{14,16,22}, Catherine Sautès-Fridman^{1,2,3}, Hussein A. Tawbi^{23*} & Wolf H. Fridman^{1,2,3*}



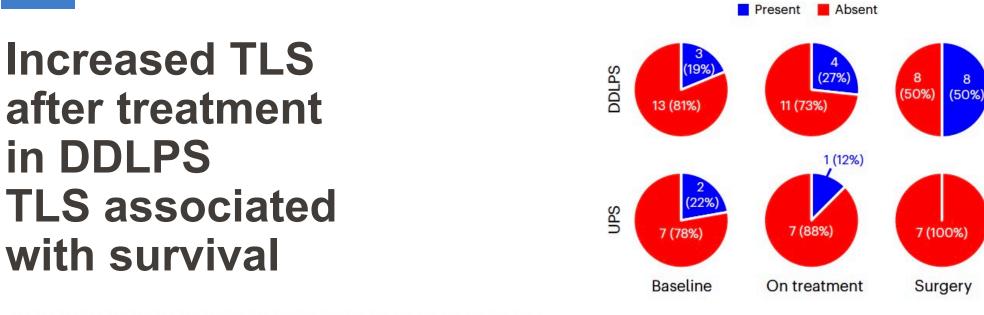
MCP-counter

Gene expression-based TME deconvolution tool



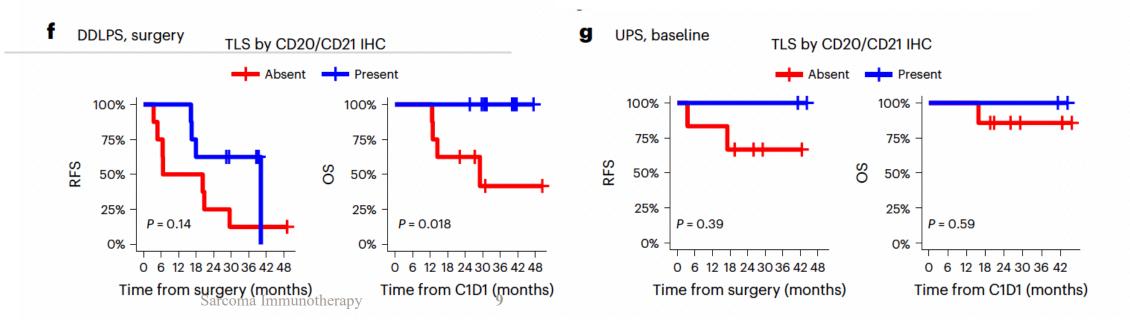
Nature, 2020

after treatment in DDLPS TLS associated with survival



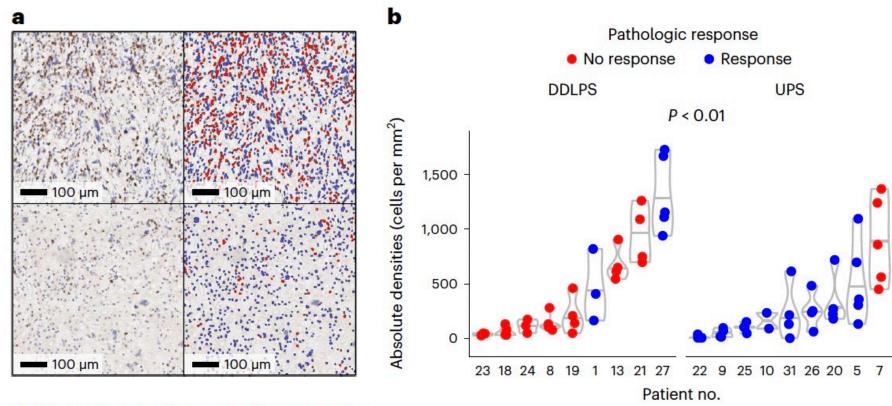
b

TLS by CD20/CD21 IHC



Intratumor heterogeneity

CD8 single stains intratumor heterogeneity



EavD2 single stains intratumor hotorogonalty

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Conclusion

Good activity in UPS

? Reasonable outcomes in DDLPS given high risk population

TLS remains important biomarker

Need better surrogate outcome

Future Directions

Long term data for UPS

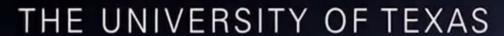
SARC032 at ASCO

In DDLPS - combination needed

- Adria/PD1
- PD1 + XRT

Need to standardize surrogate outcomes

Necrosis vs hyalinization



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