Characteristic	<u>Non-ulcerated</u> (n=30)	<u>Ulcerated</u> (n=32)	<u>P-value</u>
Age (years), median (range)	67 (27-87)	69 (38-87)	0.420
Sex, no. (%)			0.652
Male	19 (63)	22 (69)	
Female	11 (37)	10 (31)	
Site of Primary Lesion, no. (%)			0.075
Axial	16 (53)	24 (75)	
Extremity	14 (47)	8 (25)	
Thickness (mm)			0.015
Mean	2.84	4.21	
Median (range)	2.65 (1.20-6.20)	3.24 (1.30-13.00)	
Stage, no. (%)			0.960
Stage II	18 (60)	19 (59.5)	
Stage III	12 (40)	13 (40.5)	
Tumor Infiltrating Lymphocytes,			0 475
no.(%)			0.473
absent	3 (10)	6 (19)	
Present	27 (90)	26 (81)	
CD2+ cells			
Mean	80.20	52.20	0.068
Median (range)	69.75 (8.50-391.44)	46.60 (3.87-130.25)	0.008
Status, no. (%)			0.077
Alive	12 (40)	20 (62.5)	
Dead	18 (60)	12 (37.5)	
Time to death (months), median			
(range)	30.5 (16-139)	23 (6-67)	0.138
Time to censure (months), median (range)	55 (4-132)	43 (12-130)	0.690

 Table S1. Comparison of Clinicopathologic Characteristics of Ulcerated and Non-ulcerated Melanomas.

	Non-ulcerated (n=30)		Ulcerated (n=32)			
	OS	RFS	OS	RFS		
Age	0.561	0.528	0.014	0.028		
Depth	0.206	0.216	0.138	0.328		
Mitotic index	0.003	0.003	0.553	0.833		
Gender	0.359	0.282	0.658	0.081		
Stage	0.038	0.048	0.111	0.201		
TILs	0.237	0.209	0.004	0.001		
Bolded figures are statistically significant, p<0.05 Quantitative variables: Age, Depth, Mitotic index. Categorical variables: Gender (M or F), TILs (absent or present), Stage (II or III)						

Table S2. Multivariate Cox Regression Analysis Including TILs: Predictors of OverallSurvival (OS) and Recurrence Free Survival (RFS) in Ulcerated and Non-ulceratedmelanomas.

TILs are associated with improved OS and RFS in ulcerated melanoma tumors but not in nonulcerated melanomas.

	Non-ulcerated (n=30)		Ulcerate	<u>ed (n=32)</u>			
	OS	RFS	OS	RFS			
Age	0.480	0.572	0.020	0.036			
Depth	0.210	0.193	0.084	0.158			
Mitotic index	0.003	0.003	0.163	0.212			
CD2	0.363	0.600	0.084	0.013			
Gender	0.232	0.316	0.496	0.235			
Stage	0.038	0.041	0.085	0.075			
TILs	0.281	0.186	0.177	0.222			
Bolded figures are statistically significant, p<0.05							
Quantitative variables: Age, Depth, Mitotic index, CD2							
Categorical variables: Gender (M or F), TILs (absent or present), Stage (II or III)							

Table S3. Multivariate Cox Regression Analysis Including CD2 and TILs: Predictors of Overall Survival (OS) and Recurrence Free Survival (RFS) in Ulcerated and Non-ulcerated Melanomas.



Fig. S1 BRAF status does not correlate with TILs, CD2, or ulceration status. A-B Representative images of BRAF staining with anti-VE1 antibody. (**A**) 3+ staining of VE1 antibody (x40 and x100, inset) (**B**) 0+ staining with VE1 antibody (40×, 100× inset). (**C**) CD2 count and BRAF status show no significant correlation (p=0.463, Mann Whitney test. (**D**) TILs and BRAF status show no correlation (p=0.785, Mann Whitney test. (**E**) Ulceration status and BRAF-status do not correlate (p=0.185, Fisher's exact test)

CD3/CD2 CD3 H&E CD2 20 µm 20 µn . 20 µm 20 µm

Specimen 1

2

Specim

3

cim

4

Specimen

Fig. S2 Additional immunofluorescence stain of CD2/CD3 and CD2/CD56 co-localization. Charged slides of two melanoma specimens with high CD2 and anti-CD3, anti-CD3, anti-CD3, anti-CD3, anti-CD3, anti-CD2 and anti-CD3, anti-CD3, anti-CD2 and anti-CD3, anti-CD2 and anti-CD3, and anti-CD3, anti-CD3,

20 µ

20 µn







Fig. S3 Immunofluorescence stain of CD3/Foxp3 co-localization. Charged slides of two melanoma specimens with high CD2 counts (top two rows) and two specimens with low CD2 counts were co-stained with DAPI, anti-CD3 and anti-Foxp3 antibodies. Merged images of co-localization and single channels of anti-CD3 and anti-Foxp3 are shown. H&E images of the stained areas are shown to confirm lymphocyte infiltration in the tumors. White arrows in row 2 and 3 showed cells positive for both CD3 and Foxp3

Specimen 4