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욲黎싵齒髂귁쟤믩뢺숀뫟곸뿧죡쎯 CD4$^+$ CD25$^+$ Foxp3$^+$ Treg 솽髮麂용곸鶲억쇱

魡　쏳錯罙　뻯錯戳　싾
侙헌點냉鷗81 쓂읇錯罙뷚 뛔낮　210000債

잿쒯淹戳鶲　쎝냄믩뢺숀뫟볺죓돋욲黎싵齒髂귁쟤뿧죡쎯 CD4$^+$CD25$^+$Foxp3$^+$鷥꿟싵 T 솽붲뢼연용곸鶲氤삾. 黛黼　귝聆싵黨샻 102 댂욲黎싵齒髂귁쟤낲믩뢺숀뫟죓돋곸뿧죡쎯 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑쬆연믿鵑벷껩鶲氤뎯. 뀚가　욲黎싵齒髂귁쟤믩뢺볺곸 CD4$^+$CD25$^+$Foxp3$^+$솽髮쟁 CD4$^+$T 鶲魑댂쇙죽뀪鷑鏘뎨둪鵚黨룟、죜뫟鵑슦、AFP 붲뢼쇥氤. CD4$^+$CD25$^+$Foxp3$^+$鷥꿟싵 T 솽髮볾뛄연믿鵑듏쇥氤. 뀚든　욲黎싵齒髂귁쟤믩뢺숀뫟죓돋곸뿧죡쎯 Treg 붲뢼볌럕麂용곸鶲鰱덯용鰔좽魔.
氤껥鴿淹믩뢺숀뫟볺灴욲黎싵齒髂灴D4$^+$CD25$^+$Foxp3$^+$Treg 솽髮灴뢇쓤鶇뛡灴용곸
죕뾴黨닥곊淹735. 7　　색쇔魔좽듰淹

Effect of CD4$^+$ CD25$^+$ Foxp3$^+$ Regulatory T Cells in Peripheral Blood on the Prognosis of Patients with Primary Liver Cancer after Radiofrequency Ablation侙RFA債

CHONG Yang錯IANG Tao錯WANG Xuan
侙*The 81th Hospital of PLA*錯*Nanjing 210000*錯*China*債

Abstract淹Objective　To discuss the correlation between the level and the prognosis of CD4$^+$CD25$^+$Foxp3$^+$ regulatory T lymphocytes in peripheral blood of patients after the RFA. **Method**　A total of 102 patients with primary liver cancer who received RFA were enrolled in the study. The relationship between the ratio of CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$Treg cells and the survival time of them was evaluated by COX regression. **Results**　The ratio of CD4$^+$ CD25$^+$ foxp3$^+$ regulatory T cells in peripheral blood after radiofrequency ablation declined significantly錯nd was related to the clinicopathologic characteristics錯umor sizes and AFP values錯he number of CD4$^+$CD25$^+$Foxp3$^+$ cells was also significantly correlated with the survival rate 侙$P<0.01$債 **Conclusion**　The CD4$^+$CD25$^+$Foxp3$^+$ regulatory T lymphocytes level in peripheral blood is an independent predictive factor for judging the prognosis of patients with primary liver cancer after radiofrequency ablation.
Key words淹radiofrequency ablation灴primary liver cancer灴CD4$^+$ CD25$^+$ Foxp3$^+$ regulatory T lymphocytes灴immunity function灴prognosis

욲黎싵齒髂볌짳鰌꼀鶲慶싵죜돻좳쐴鑎뷩벿볺　髂귁쟤냒쟴벷엎엟죜돻믿鰌鯢삯귱齒鵯뛡鮫魁꿔맕鮖쒍몱魂뫔삯볌죓엿齒髂鶲주쒯벿鹿鑞鷁싲麋齒　鯽鑎鷁慶벬몱벿볺맕鮖鶲귿귦. 짼삯齒髂냛鯢죓돋

벿醡뫚룟淹013-01-15
귾꿵싓뛄滭낮냉맽쐶쎐꼀鴆싵죝鷛짏죿싓뛄侙0Z012債
짼쟤껷꿮滭방　쏳侙987－債 쀟戳별쎝냄믿鎽주쒯鵛볇 RFA 돐鵚곒귾鴣쎝냄灴
　　뾭쉶짼쟤滭罙　뻯侙965－債 쀟鑢주뫓쐶볇鎽주쒯鵛볇 RFA 돐鵚곒귾鴣쎝냄.

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껁봖鐽릹 뢺숀뫟봖侘RFA儥뎆 돋슬믔뇎몦鶒연뿧뇋 맕鮖쇥鷂鶒슬가[練鍋]. 齒髂鶒黎믿、黎잾연麋죛쓷뷝 엕氤鐽룪 죕鐽큳뻪鶒뗧쓤鶇뛡鵛쇇볌주쒯욲쓷쵋쓀錯 麎뇊죜돻뗧쓤주쒯볌솽髽뗧쓤[練鍋]. 삯돐꿧욲黎싙 齒髂귁쟤믩뢺죓돋릵 CD4$^+$CD25$^+$Foxp3$^+$Treg 齋魒연용곸鶒氤삾鐽뗁꺴껱鰋 102 댂뗄몼쟴麃삯욲黎싙齒髂귁쟤뿧죡쎯 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑좺鐽黨샻룩齋魒연용곸鶒氤삾.

1 짏돔연黛鶸

1.1 돞鵚짏돔

쎯몦꿧點냉鷗 81 쓂욿 2008 뛯 1 웆—2010 뛯 6 웆 102 댂齒髂귁쟤鐽뵶엕귁쟤냾黷곔 2001 뛯鷗髕꿱몰ᵒᵒ齒髂썘볹귦쓮쁕갂鶒욲黎싙齒髂쟴麃魔직[練鍋]鐽돉鵚쟴麃삯욲黎싙齒髂귱싕齒鴨귲껱鮭닯 썘뗄몼쟴麃. 룩죕鐽뛱 84 댂鐽뱋 18 댂鐽뛯돩 35 ~ 79 뷯鐽싶뛯돩侘9.5 ± 6.28儥뷯. 齒鶇뛡 Child-Pugh 黨꺻 A 꺻 56 댂鐽 꺻 46 댂. 죜돻魑욺냥닰웥뗫 < 10 mm 23 댂鐽뙤돻魑욺냥닰웥뗫≥10 mm 79 댂. 鮭웳짳鵖낻≤30 mm 36 댂錯0 ~ 50 mm 50 댂錯0 ~ 70 mm 12 댂錯>70 mm 4 댂. 鶿齠鮭웳귁쟤 80 댂錯齠鮭웳귁쟤 14 댂錯 ~ 4 齠鮭웳귁쟤 8 댂. 鮭댂쎯웶럊鮖곔鯑엕억쇱귿뻪뗧쓤鶇뛡꺷鮭鶒귁쟤鐽뱛삹벾었억쇱귿뻪뗧쓤鶇뛡鶒쒮샴.

1.2 죓돋黛鶸

麎鶤꺰믩뢺숀뫟솺뾸侘-1500 믩뢺죓돋쓌鐽R겨뒤鶺쓂돋뇋껁祓뷃儥 鐳뢺 460 kHz鐽뛱鮭鶇듏 1 ~ 90 W뎱싽뇎鷥鐽뵪죕짭뇊魑궴곒짮좴뜂瞅싙궺 뷅鱷鹿엎주귿짙鷖鰋볙붿鱌. 럩뻜벾었齋祓뷃鶒 VITA侘0—161361儥R麎鶤꺰믩뢺쟔鐽鵇鵀곸뇎鱱 뮦즹냾웍쟊놯 10 떻鶤꺰鐽돿놯짳鵖쵪낻삯 4.0 cm. 뫹鮭웳꿔鵖쟤髂죝鷩숀뫟욲닲麎鵁黕釀鴨鵀숀뫟錯 쓙짳鵖쇣鹿떽귲鮭웳鐽뛱鵁죓돋갂鱷죕鶒숀뫟솺鷛 鯠鱠갂 5 齠鐽뙫뫟꿨볽곸꿽싕쟔鷛숀뫟.

1.3 껱鰋黛鶸

엟볹릵、볹곸 1 齠웆黨魑鮀쎯뷒껱鐽瞉었돼볂솽髽껋봂쓌侘L/XL-MCL鐽뛱ᵒᵒ鮅뇐듹祓뷃儥껱鰋 CD4$^+$CD25$^+$Foxp3$^+$/CD4$^+$魑좺꺻 CD4$^+$/CD8$^+$魑좺. 뷫黝벷껍꿝좿鱇 2012 뛯 12 웆 31 뫛鐽룪鯢귁쟤냾귬鶒뷫黝.

1.4 뾸껋썘黛鶸

鯧었 SPSS 13.0 꿽싕뾸껋썘黨샻鐽헗도짏돔었냾봂 ± 魔직鯏侘 ± s儥幾볃鐽뛱짮껍뎊齷뎡쐚魆鯧었 t 껱쑺귱럩麂 t 껱쑺. 麎쓷뷝黨샻鯧었 Cox 귝ᵃᵃ뚨싌鐽黨샻뿧죡쎯 Treg 연믿鵑듏鶒氤삾. P < 0.05 뫔삯鯏쓱엕뾸껋썘쓧쑺.

2 꿠　　가

2.1 RFA 죓돋릵곸 CD4$^+$/CD8$^+$ 꺻 CD4$^+$CD25$^+$Foxp3$^+$/CD4$^+$鶒魒궴

엎魑 1 뇎껈滿R 黎싙齒髂귁쟤 RFA 죓돋릵곸 CD4$^+$/ CD8$^+$魑좺밂齞鐽변 죓돋릵쇥魑鐽刺쓱생뾸껋썘쓧쑺侘P > 0.05儥 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑좺꾹鷑鐽변 죓돋릵쇥魑鐽刺쓱엕뾸껋썘쓧쑺侘P < 0.01儥

魑 1　믩뢺릵곸 CD4$^+$/ CD8$^+$魑좺꺻 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑좺

Tab. 1　Change of CD4$^+$CD25$^+$Foxp3$^+$/CD4$^+$ and CD4$^+$/CD8$^+$ cells before and after RFA

짮魑	CD4$^+$/ CD8$^+$	CD4$^+$CD25$^+$Foxp3$^+$/CD4$^+$
믩뢺릵	1.19 ± 0.49	3.04 ± 0.17
믩뢺곸	1.33 ± 0.53	2.43 ± 0.37
t	1.958 9	15.130 0
P	0.051 5	0

2.2 귁쟤뿧죡쎯 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑좺연돞鶒뻝쟼鶒氤삾

黨샻齒髂뿧죡쎯 Treg 魑駿연돞鶒뻝쟼黎쇷滿 CD4$^+$CD25$^+$Foxp3$^+$/ CD4$^+$魑좺연죜돻鵖슦、BLCL 黨룟、AFP 붲뢼엕氤鐽刺쓱엕뗄쇙뾸껋썘쓧쑺侘P < 0.05儥욲黎싙齒髂귁쟤 RFA 죓돋곸뿧죡쎯죕 Treg 魑좺연싙魖、뛯돩、Child-Pugh 黨꺻、HBsAg、齒얷궴、뗊냯듻齞쎆、볌黵齡죓싙맕鮖볹곸鱔黎냾쇙뾸껋썘쓧쑺. 꼀魑 2.

魑 2　CD4$^+$CD25$^+$Foxp3$^+$붲뢼연돞鶒뻝鷛鶸氤삾

Tab. 2　The relationship between CD4$^+$CD25$^+$Foxp3$^+$ level and clinical characteristics

쇳뛄		n	CD4$^+$CD25$^+$Foxp3$^+$/CD4$^+$	t	P
싙魖	뛕	84	2.53 ± 0.47	1.580 2	0.117 2
	랳	18	2.35 ± 0.23		
뛯돩/뷯	≤60	55	2.55 ± 0.66	1.352 1	0.179 4
	>60	47	2.39 ± 0.51		
鮭웳	<50	86	2.40 ± 0.11	2.017 1	0.046 4
좺낻/mm	≥50	16	2.48 ± 0.27		
BCLC	A	48	2.41 ± 0.21	2.019 9	0.046 1
黨룟	B ~ C	54	2.49 ± 0.19		
Child-Pugh	A	56	2.44 ± 0.28	0.481 0	0.631 6
黨꺻	B	46	2.41 ± 0.35		
AFP/	<800	60	2.40 ± 0.19	2.304 0	0.023 3
侘g·L^{-1}儥	≥800	42	2.49 ± 0.20		
HBsAg	쓺싙	13	2.48 ± 0.51	0.399 6	0.690 3
	쐆싙	89	2.41 ± 0.60		
齒얷궴	쌯	8	2.47 ± 0.49	0.405 6	0.685 9
	엕	94	2.42 ± 0.32		
뗊냯듻齞쎆	쌯	34	2.45 ± 0.24	0.502 0	0.616 6
	엕	78	2.42 ± 0.31		
鱔黎	볌	41	2.46 ± 0.49	0.565 9	0.572 7
	黵	61	2.42 ± 0.21		

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2.3　믿鵑黨샻

齒髂뿧죡쎯 Treg 鶏뻃駿연믿鵑듏좳껩鶏氭 岼滝02 댂齒髂귁쟤믿鵑 3 ~ 60 齠웆錯 a 믿鵑듏 88% 錯 a 믿鵑듏 46% 錯 a 믿鵑듏 26 %. CD4⁺CD25⁺Foxp3⁺Treg 쟁 CD4⁺T 솽髮鶗댂연믿鵑듏쇥氭俛² = 11.561 2錯 = 0.000 7價 鱹쓱엕뾸껋쎬쓧쓯俛 < 0.01價

3　뻛　　든

웟죜돻黎믿갂鱹죕錯Treg 鶏뗧쓤샣뛡곒뗧쓤 쓡죋돂鵑鵯뛡벾죜돻뗧쓤뻘쓜錯駬죇귿뻪麂죜돻鶏 뗧쓤샣얫鶒귷뗧쓤뛉볡. Treg 웟삱鱔麂짙믲鰭黨뗧쓤뛉볡鶏뽁벶쒷짭좾돐귿뻪麂짙뻪뽁욹죜돻솽髮鶏뗧쓤錯웟죜돻鶏黎믿、黎잾갂鱹죕黎귘죝쒯짼었. 뛉릵쎝냄黎쇚滝웟麋죚麋싙죜돻귁쟤뿧죡쎯곒죜돻 뀃뫸돡髕솽髮죕鵑웟짊 Treg 봂뛉귷鶗댂웻齠鶏쇚쇸錯뻦볃麋싙죜돻귁쟤뻪뛟 Treg 믔鷥볌쓀齠룙魔쇚쇸鍊鍋. Kobayashi 鷓鍊鍋黎쇚웟齒髂鶏髂릵鮭魒、웬룟죜돻곒죜돻鶏꿽잾룟錯reg 봂뛉、鶗댂뷫짊죜돻黎믿、꿽잾종꾪믔밂錯뻦볃 Treg 연죜돻黎믿、黎잾 꺵용곸鶏氭삾뗡맕.

鱹짼샋默언솽髮뗧쓤鵯뛡 CD4⁺/CD8⁺鶗좼좽魔웟믩뢾죓돋곸밂齠鑞생쇙죽뾸껋쎬쓧쓯. 돲뿧錯랖갂믩뢾죓돋鶏齒髂귁쟤뿧죡쎯 CD4⁺CD25⁺Foxp3⁺Treg 쟁 CD4⁺T 솽髮鶗댂꿔볹릵뗄쇙꾹鶑錯엕쇙죽뾸껋쎬쓧쓯錯헜쎝냄鯧었 CD4⁺CD25⁺Foxp3⁺짼샋 Treg 좽魔. 엕쇥氭쎝냄魒뗄滝CD4⁺CD25⁺Foxp3⁺Treg 볌쓀齠뛉릵삭쓀쏔齞쓧쓯믔鶏魔껌鍊鍋錯랐鴟麋봂쎬재뷾鯧었.

魆볙쑺뀚가뻦볃滝CD4⁺CD25⁺Foxp3⁺/CD4⁺鶗댂연죜돻鴟슦、黨룟꺵 AFP 뷫룂뗡맕쇥氭鐽됰돻 꿔鴟쟤、죜돻黨룟꿔뛞쟤꺵 AFP 뷫룂쓱鱹밂齠쟤뿧죡 CD4⁺CD25⁺Foxp3⁺/CD4⁺鶗 댂 꿔 齠. Ormandy 鷓鍊鍋쎝냄魒뗄滝CD4⁺CD25⁺Foxp3⁺Treg 봂뛉연죜돻黨룟뗡맕쇥氭鐽됰웂뛞錯CD4⁺CD25⁺Foxp3⁺Treg 봂뛉웂麋鐽뻦볃 Treg 봂뛉쟁 CD4⁺T 솽髮鶗댂꺵봂뛉연죜돻齋곎엕氭鐽됰쓷뷝뇎쓙벾 Treg 웻께.

Treg 볌鱖죇뗧쓤쓡죋鶏氭껥쓷뷝鍊鍋錯甕엟죜돻귁쟤생든볌뿧죡쎯궾볌죜돻삧궼낸죕쇙죽밂齠鶏 Treg 鱹뻦볃용곸꿔鯏鐽묃鵑룟꿔鹿鍊鍋. 魆볙쑺魒뗄滝웟齒髂뿧죡쎯 Treg 鶏魔駿연용곸氭삾쎝냄죕錯CD4⁺CD25⁺Foxp3⁺쟁 CD4⁺T 솽髮鶗댂꺵봂뛉연齒髂귁쟤鶏믿鵑듏쇥氭鐽볌齒髂龌뎧鶏용곸쓷뷝錯뉘짼샋럕麂용곸鶏좽魔좳쓀. 뛉릵鶏齠쎝냄鬻 鶊죕錯볾놺麂쟚곒齠죚죜돻뿧죡쎯 Treg 솽髮鶗댂뀚가鯏쓱꿔鵑. 샗뗌鯧었 CD4⁺CD25⁺Foxp3⁺T 솽髮짼샋 Treg 魔껌錯묃鰋齒髂뿧죡쎯죕 Treg 鶏鶗댂샋侂. 43 ± 0.37價% 錯변 ᄃᄃ 뛟벸席髂뿧죡쎯鶏봂냢侂. 72 ± 1.39價% 뀐뀁鍊鍋錯D4⁺CD25⁺Foxp3⁺Treg 齡께뛡鐲黀언 Treg 鶏쟫벺징뺱.

짡좳錯齒 髂 뿧 죡 쎯 CD4⁺CD25⁺Foxp3⁺쟁 CD4⁺T 솽髮鶗댂웟믩뢾봖곸꾹鶑錯돋鵝黨룟꿔뾞、죜돻꿔鵑、AFP 뷫룂쓱鱔밂齠쟤鶗댂꺵봂뛉쇥鹿꿔齠鐽絺연봖곸믿鵑벶껍쇥氭. 뻦볃 CD4⁺CD25⁺Foxp3⁺Treg 뇎뛡웟齒髂뗧쓤뛉볡죕黎귘죝쒯짼었鐽甕엟럕麂齒髂鶏용곸엕쒈鶴껠좳.

鯪뇁색쇜滝

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