

Higher grade cytokine release syndrome is a predictive factor for GVHD in haploidentical stem cell transplantation with peripheral blood cell

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Matériel et méthode

Etude rétrospective unicentrique (Institut Paoli Calmettes) 2012-2019

- Donneur haplo identique
- Greffon de CSP
- Conditionnement RIC ou NMAC
- Prophylaxie de la GVH par PT-Cy 50 mg/kg J3J4 + CSA + MMF

N = 241

CRS Parameter	Grade 1	Grade 2	Grade 3	Grade 4
Fever*	Temperature $\geq 38^{\circ}\text{C}$	Temperature $\geq 38^{\circ}\text{C}$	Temperature $\geq 38^{\circ}\text{C}$	Temperature $\geq 38^{\circ}\text{C}$
Hypotension	None	Not requiring vasopressors	Requiring a vasopressor with or without vasopressin	Requiring multiple vasopressors (excluding vasopressin)
Hypoxia	None	Requiring low-flow nasal cannula [†] or blow-by	Requiring high-flow nasal cannula [†] , facemask, nonrebreather mask, or Venturi mask	Requiring positive pressure (eg, CPAP, BiPAP, intubation and mechanical ventilation)

Résultats

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2012-2019

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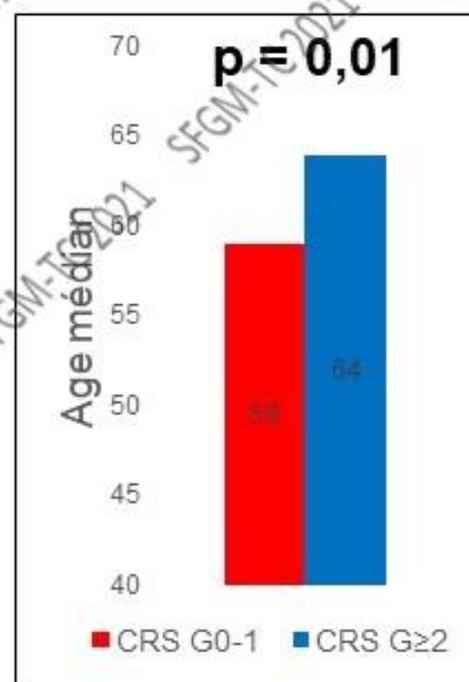
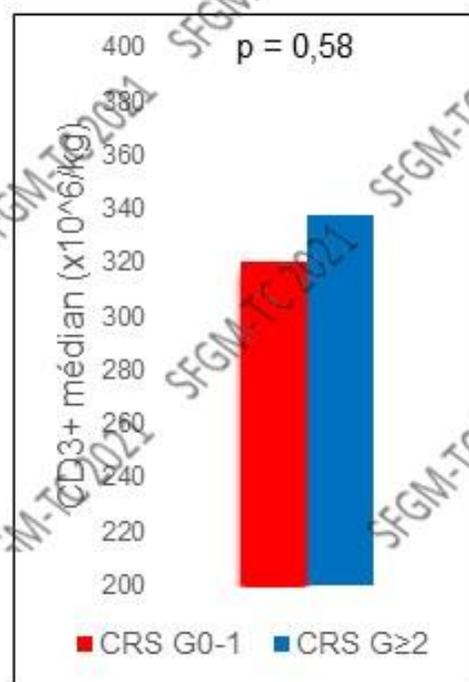
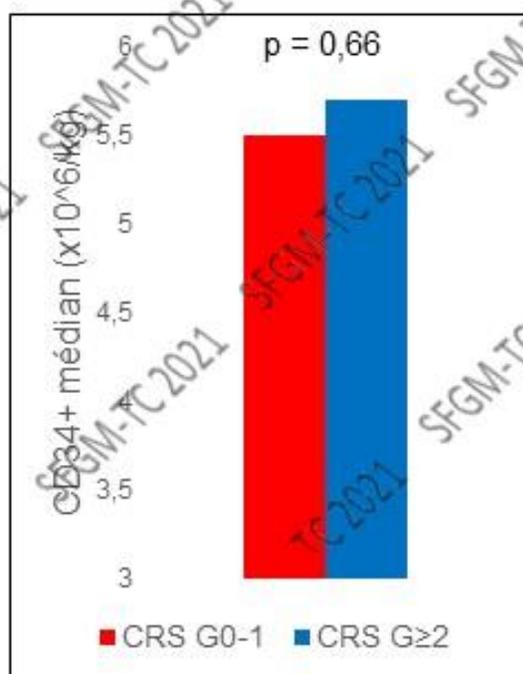
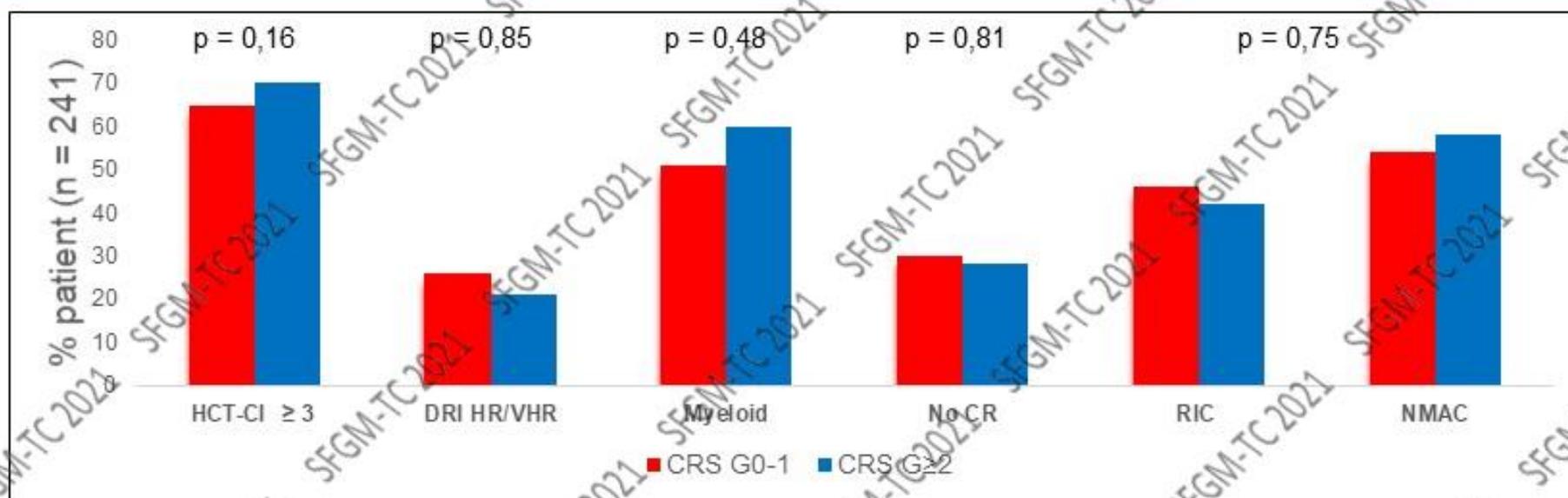
N = 241

Incidence de CRS = 226 (94%)

CRS non sévère = G0-1
N = 198

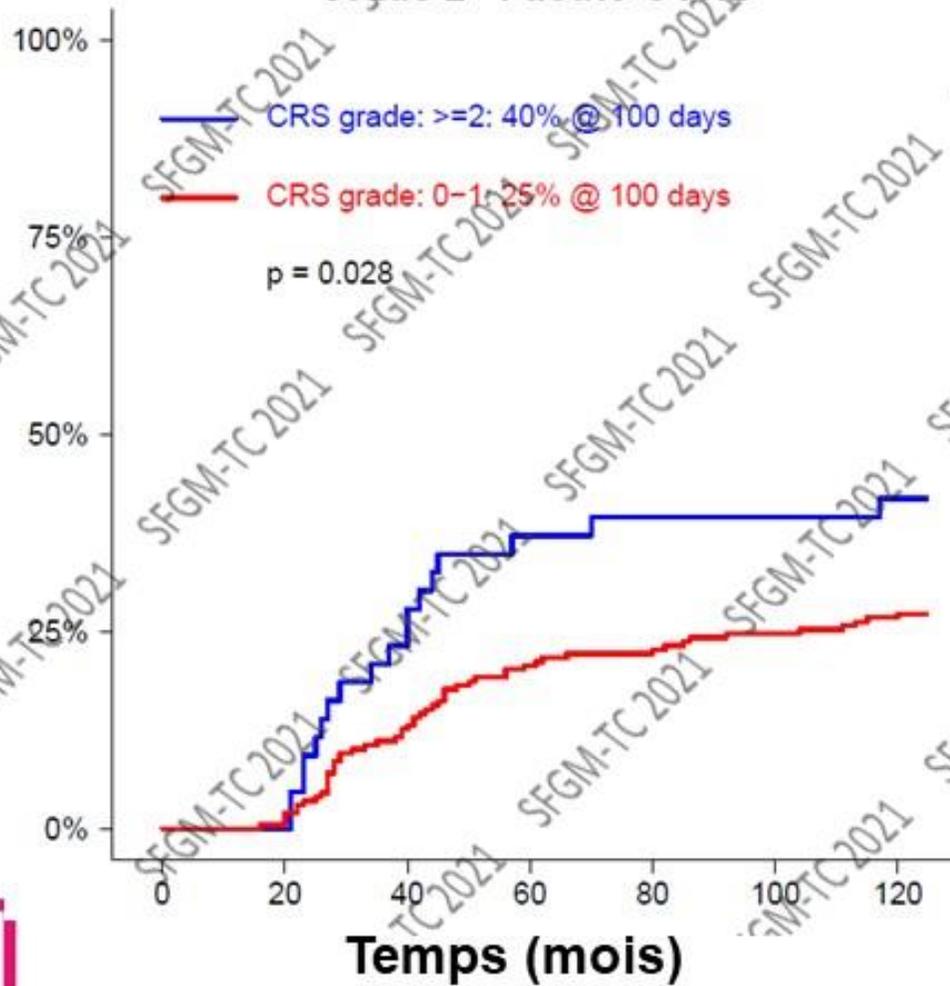
CRS sévère = G \geq 2
N = 43

Facteurs de risque de CRS sévère

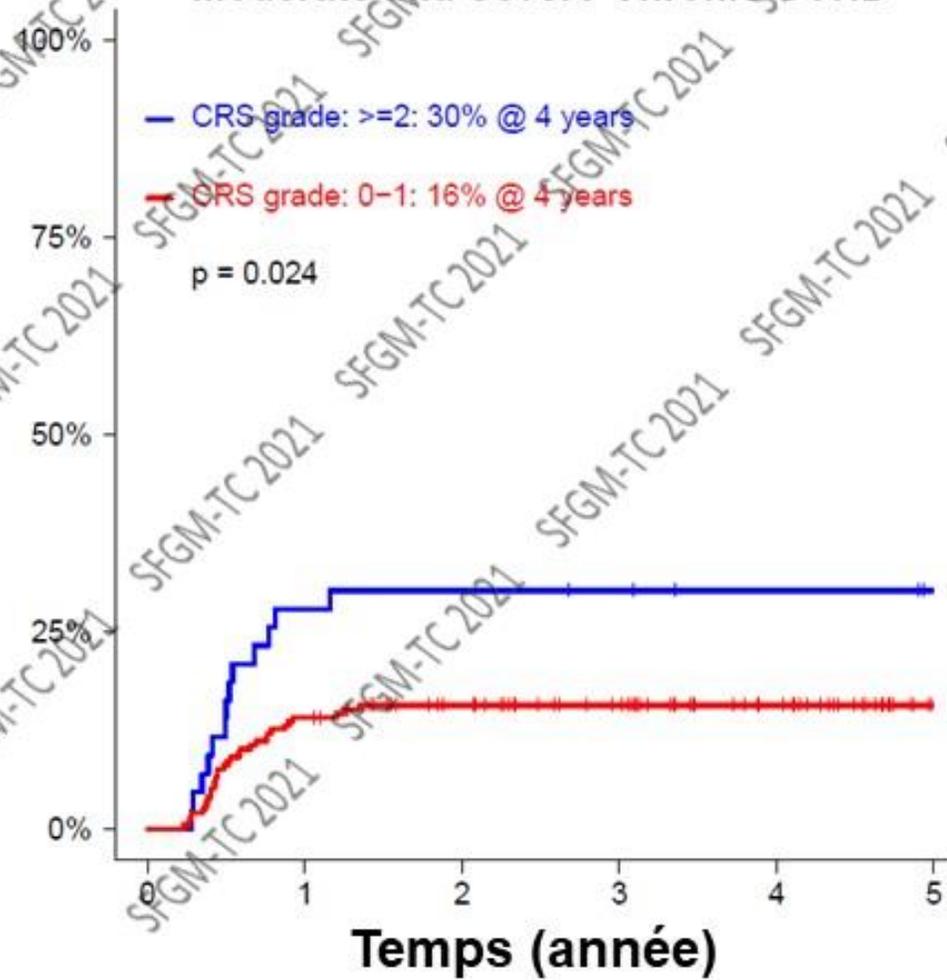


Résultats : GVH

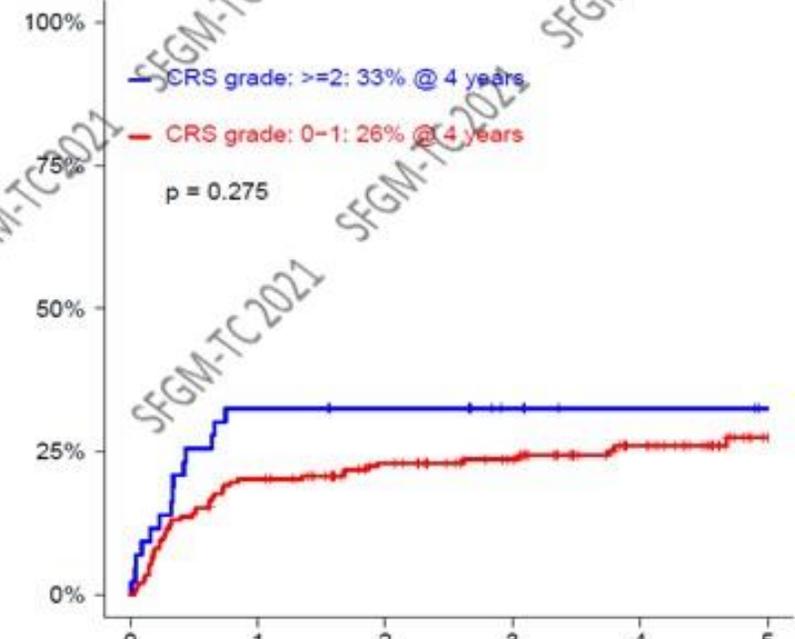
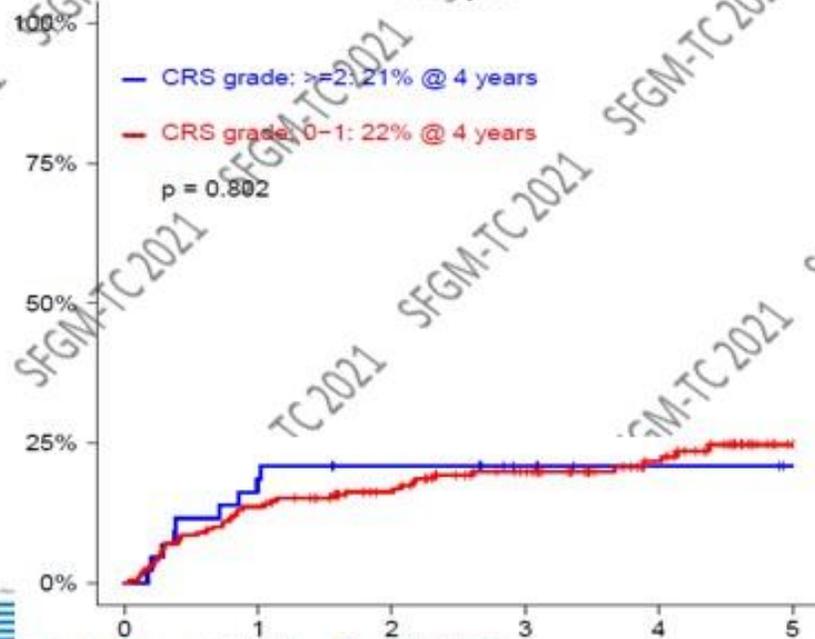
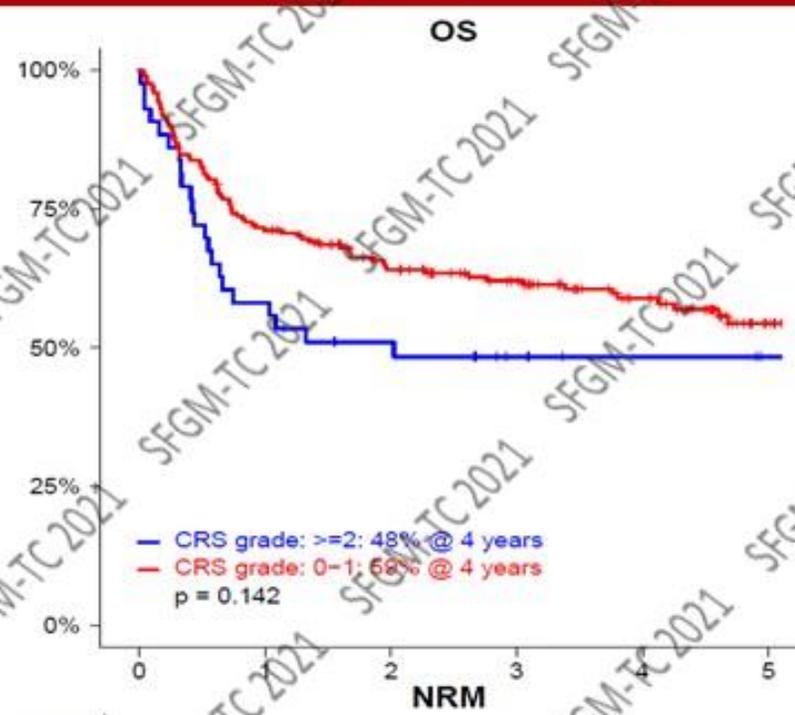
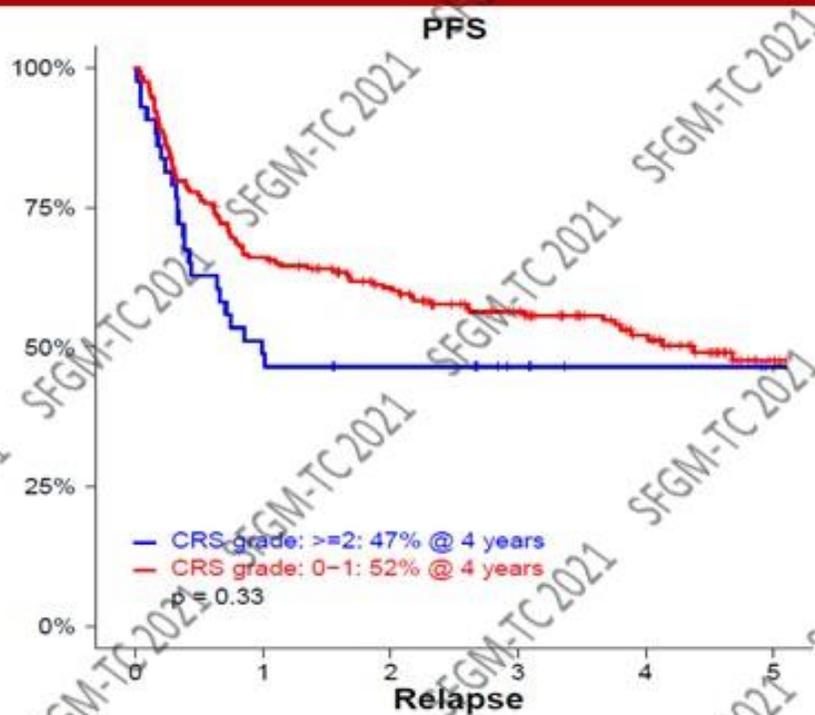
Grade 2-4 acute GVHD



Moderate and Severe Chronic GVHD



Résultats : Outcomes



Résultats : analyse multivariée

Variable	aGVH GII-IV			cGVH moderate + severe		
	P	HR	95% CI	P	HR	95% CI
CRS (G0-1 vs ≥2)	0,011*	0,50	0,29-0,85	0,004*	0,38	0,19-0,73
Conditioning (RIC vs NMAC)	0,889	1,04	0,64-1,68	0,039*	1,92	1,03-3,58
DRI (Low vs Other)	0,254	1,54	0,73-3,25	0,415	0,61	0,18-2,01
Age (continuous)	0,181	1,01	0,99-1,03	0,401	1,01	0,99-1,04
HCT-CI (<3 vs ≥ 3)	0,106	0,66	0,40-1,09	0,194	0,64	0,33-1,25

Discussion

Article	Population	Risk factors	CRS and GVH	CRS and outcome
PH Imus, BBMT 2019	<ul style="list-style-type: none"> • 146 Haplo • BM++ • NMAC 	<ul style="list-style-type: none"> • Age • ATCD Rx 	No effect	NRM
Nishimoto, BBMT 2019	<ul style="list-style-type: none"> • 73 Haplo • PBSC • PT-Cy +/- ATG • MAC 	<ul style="list-style-type: none"> • Active disease • HCT-CI ≥ 3 	Yes	No effect (NRM, CIR, OS)
Abboud, BMT 2021	<ul style="list-style-type: none"> • 451 Haplo • Multicentric • PT-Cy + Tacro/MMF or siro/MMF or CSA/MMF • PBSC + BM 	<ul style="list-style-type: none"> • PBSC • HCT-CI • 2nd allo • CMV+ 	No effect	OS, PFS, NRM
Solan, H. Oncology 2020	<ul style="list-style-type: none"> • 107 Haplo, 39 MUD • MAC + RIC • BM + PBSC 	PBSC	Yes	No effect (NRM, OS)
Bouchacourt	<ul style="list-style-type: none"> • 241 Haplo • PBSC • NMAC + RIC 	Age	Yes	No effect (NRM, OS, PFS, CIR)

Conclusion

- Données de la littérature contradictoires
- Etude unicentrique, population homogène
- 94% de CRS en greffe haplo identique avec PBSC
- CRS précoce sévère (\geq grade 2) significativement associé à GVH aiguë et GVH chronique
- Identification précoce des patients pouvant bénéficier d'une prophylaxie de la GVH renforcée