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**Introduction:** The Eurotransplant senior program Follow-up DSA analysis was routinely performed. (ESP) neglects HLA matching for elderly (>65y) kidney transplant recipients (KTR). Only few data exist regarding the influence of HLA-DR-matching on immunologic outcomes.

**Methods:** This retrospective long-term observational study included 205 elderly KTR between 2006 and 2014. Standard immunosuppression including induction therapy (IL2-R) was administered to all patients. Allograft biopsies were performed for clinically suspected rejections.

**Results:** 41 patients had full HLA-DR-match, 83 patients 1 DR-mismatch (DR-MM) and 81 patients 2 DR-MM. Baseline characteristics are shown in Table 1. Full HLA-DR-match showed significantly lower predicted rate of TCMR episodes than 1 DR-MM or 2 DR-MM (23%, 36%, 45% respectively) and less development of de-novo DSA. In addition full-DR-match also was associated with significantly less development of other types of de novo DSA (Figure 1 A-D). Only 4% of KTR developed an ABMR. The predicted patient survival 3 years post-transplant in the groups with full HLA-DR-match, 1 DR-MM and 2 DR-MM was 0.79, 0.85 and 0.81 (log rank p=0.517). The predicted death censored graft survival was 0.89, 0.91 and 0.74, respectively (log rank p=0.020).

**Conclusions:** HLA-DR mismatches are a risk factor for rejection and development of de novo DSA. DR matching might significantly improve immunologic outcomes in elderly patients.

Figure 1

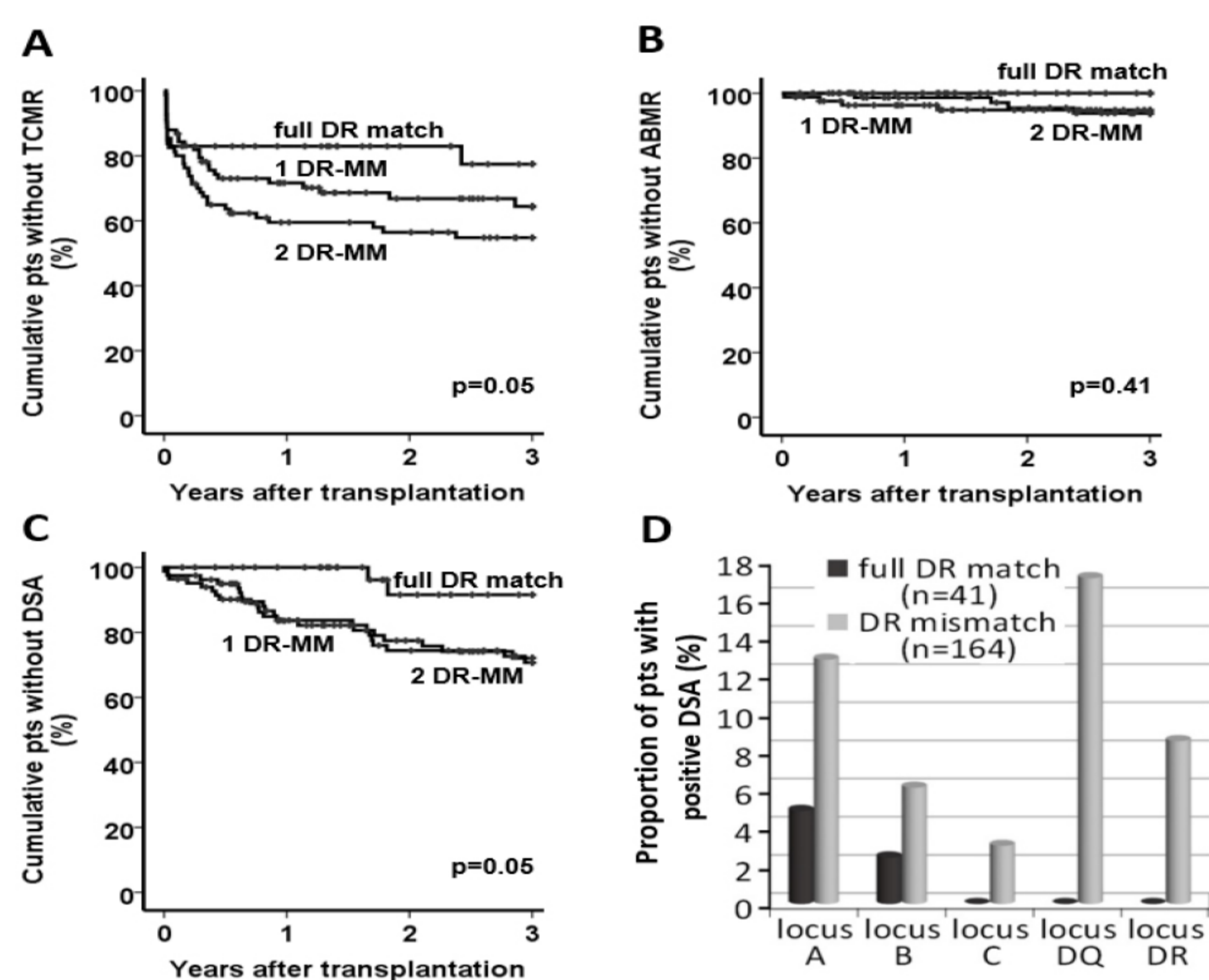


Table 1

Patient characteristics	all n=205	full DR-match n=41	DR mismatch n=164	p
Mean follow up, years (SD)	3.6 (3.3)	2.5 (1.7)	3.8 (2.4)	<0.001
Mean recipient age, years (SD)	69 (4)	70 (3)	69 (3)	0.016
Mean donor age, years (SD)	69 (9)	67 (10)	70 (9)	0.228
Male, n	119 (58%)	26 (63%)	93 (57%)	0.483
Living donor, n	21 (10%)	7 (17%)	14 (9%)	0.145
Prior kidney transplantation, n	8 (4%)	4 (10%)	4 (2.4%)	0.053
Median time on dialysis, months (IQR)	44 (25-62)	44 (26-60)	44 (25-62)	0.794
Median cold ischemia time, hours (IQR) †	10 (8-12)	11 (8-14)	10 (7-12)	0.608
Median HLA-mismatches (IQR)	4 (3-5)	2 (1-3)	5 (4-5)	<0.001

† in patients with deceased donors (n=183)

