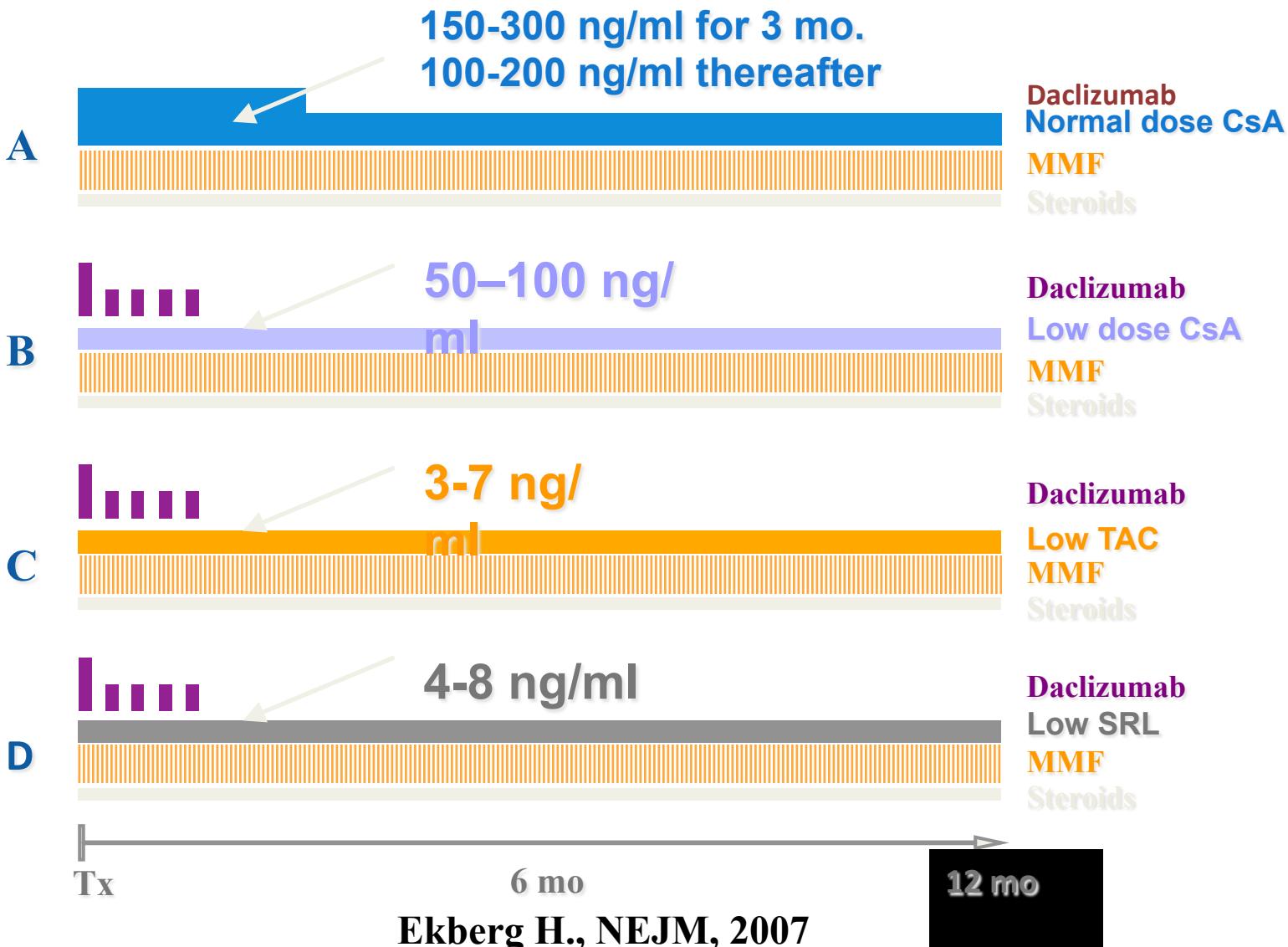


# CNI minimization Symphony study



# **Complete Steroid Avoidance Is Effective and Safe in Children With Renal Transplants: A Multicenter Randomized Trial With Three-Year Follow-Up**

**Sarwal, AJT, 2012**

- Steroid-free, extended anti-IL2R, tac+MMF
- Steroid-based, standard anti-IL2R, tac+MMF
- linear growth - no difference
- AR rate – no difference
- steroid avoidance is safe and effective

# **Subclinical Inflammation and Chronic Renal Allograft Injury in a Randomized Trial on Steroid Avoidance in Pediatric Kidney Transplantation**

**Naesens, AJT, 2012**

- protocol biopsis, indic. biopsies
- S-TCMR same i both arms (SF 10,6% vs. 11,3 SB), m6
- Cum incidence ABMR SF 6,7% vs. 2,9%
- increase of chronic changes over time

# Early steroid withdrawal thymoglobulin versus anti-IL2R

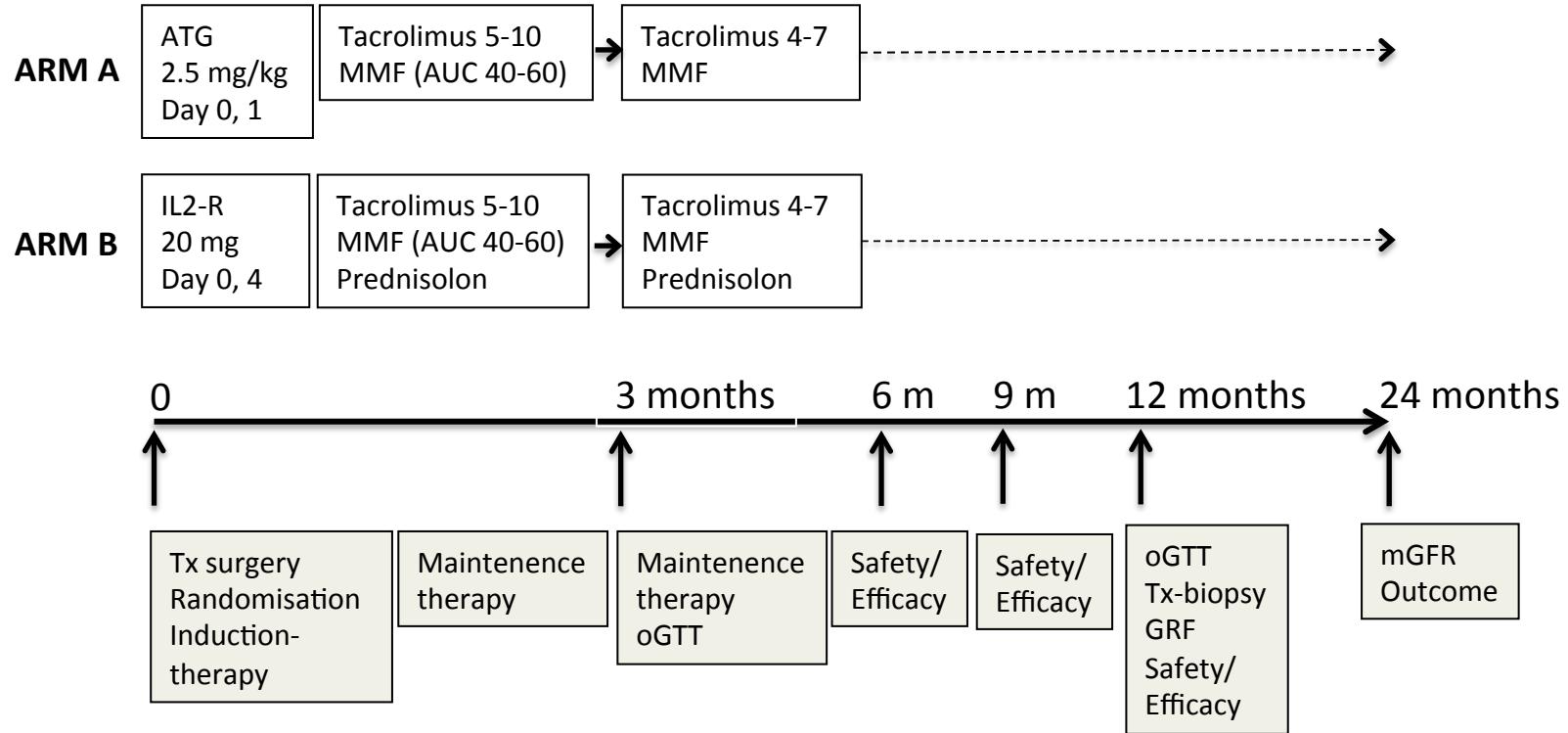
- Tac + MMF maintenance immunosuppression
- Less AR episodes with thymoglobulin induction
- Higher patient and graft survival with thymoglobulin compare to anti-IL2R

# SAILOR study



A controlled randomized, open-label, multi-centre study evaluating if a steroid-free immunosuppressive protocol, based on ATG- induction, low tacrolimus-dose and therapeutic drug monitoring of mycophenolate mofetil, reduces the incidence of new onset diabetes after transplantation

# SAILOR study



Göteborg  
Aarhus  
Malmö

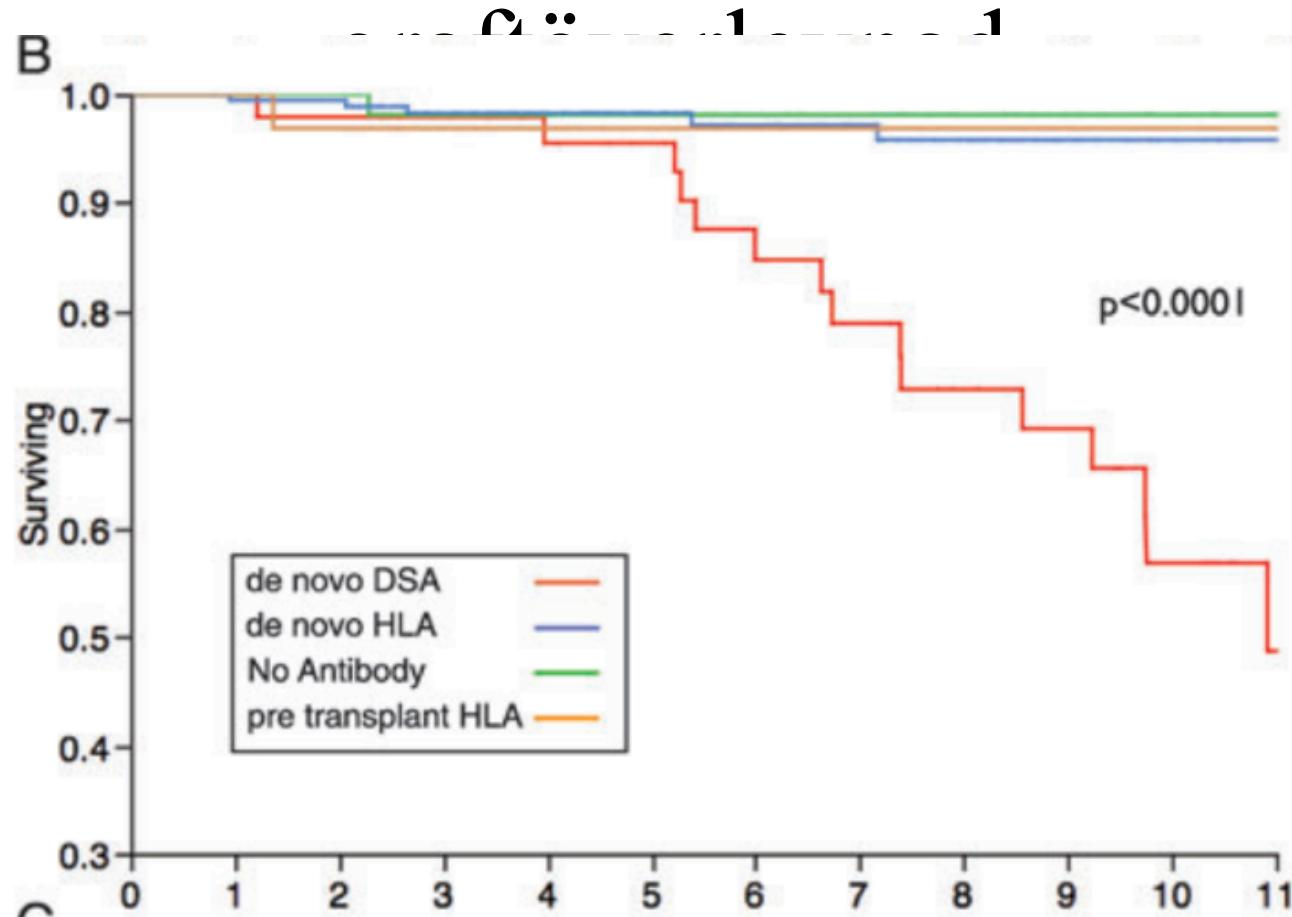
Cum. incidence  
NODAT 12 m post tx

k-SORT  
Solid Organ  
Respons Test



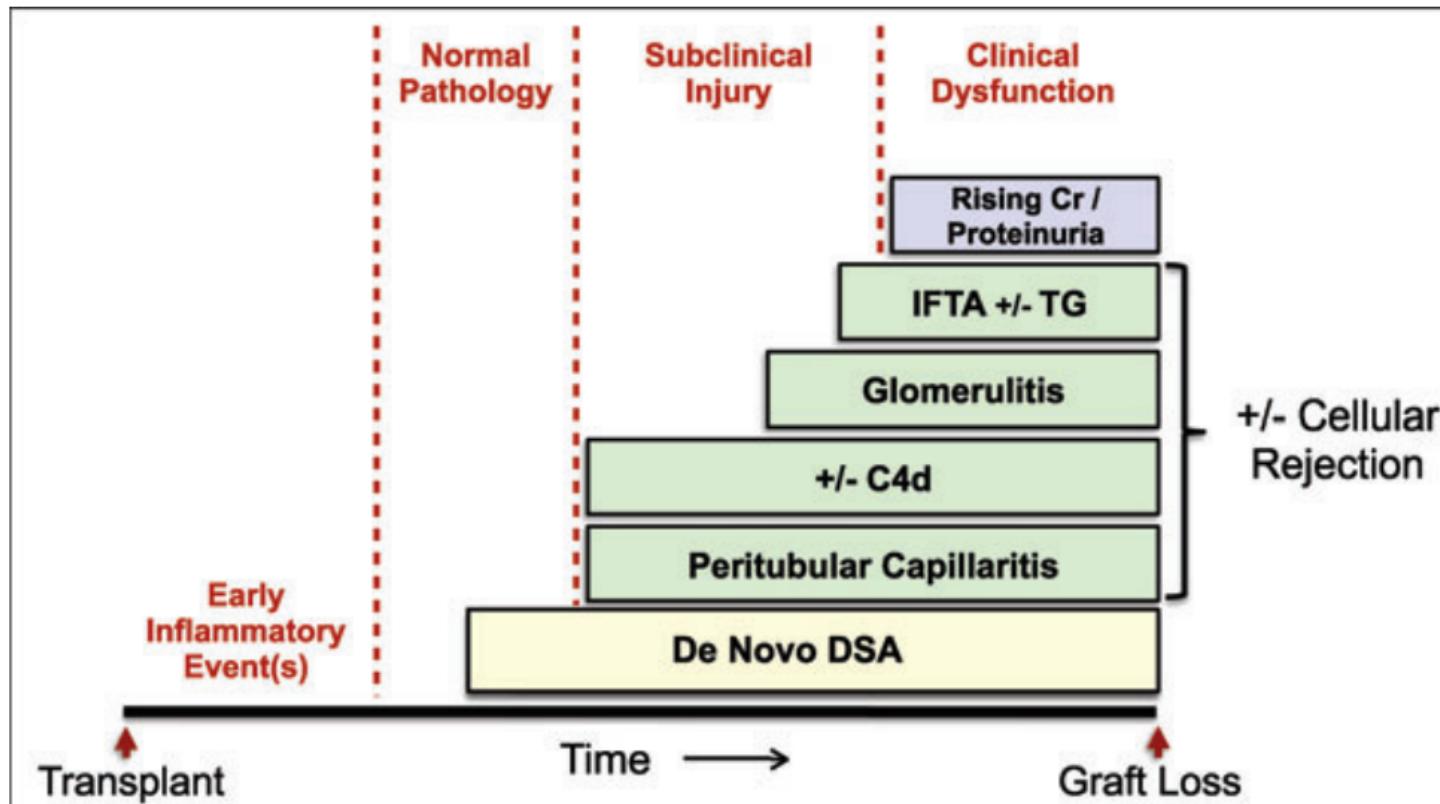
# Evolution and Clinical Pathologic Correlations of *De Novo* Donor-Specific HLA Antibody Post Kidney Transplant

Betydelse av *de novo* DSA for



Wiebe, Nickerson, AJT, 2012

# Evolution and Clinical Pathologic Correlations of *De Novo* Donor-Specific HLA Antibody Post Kidney Transplant



Wiebe, Nickerson, AJT, 2012

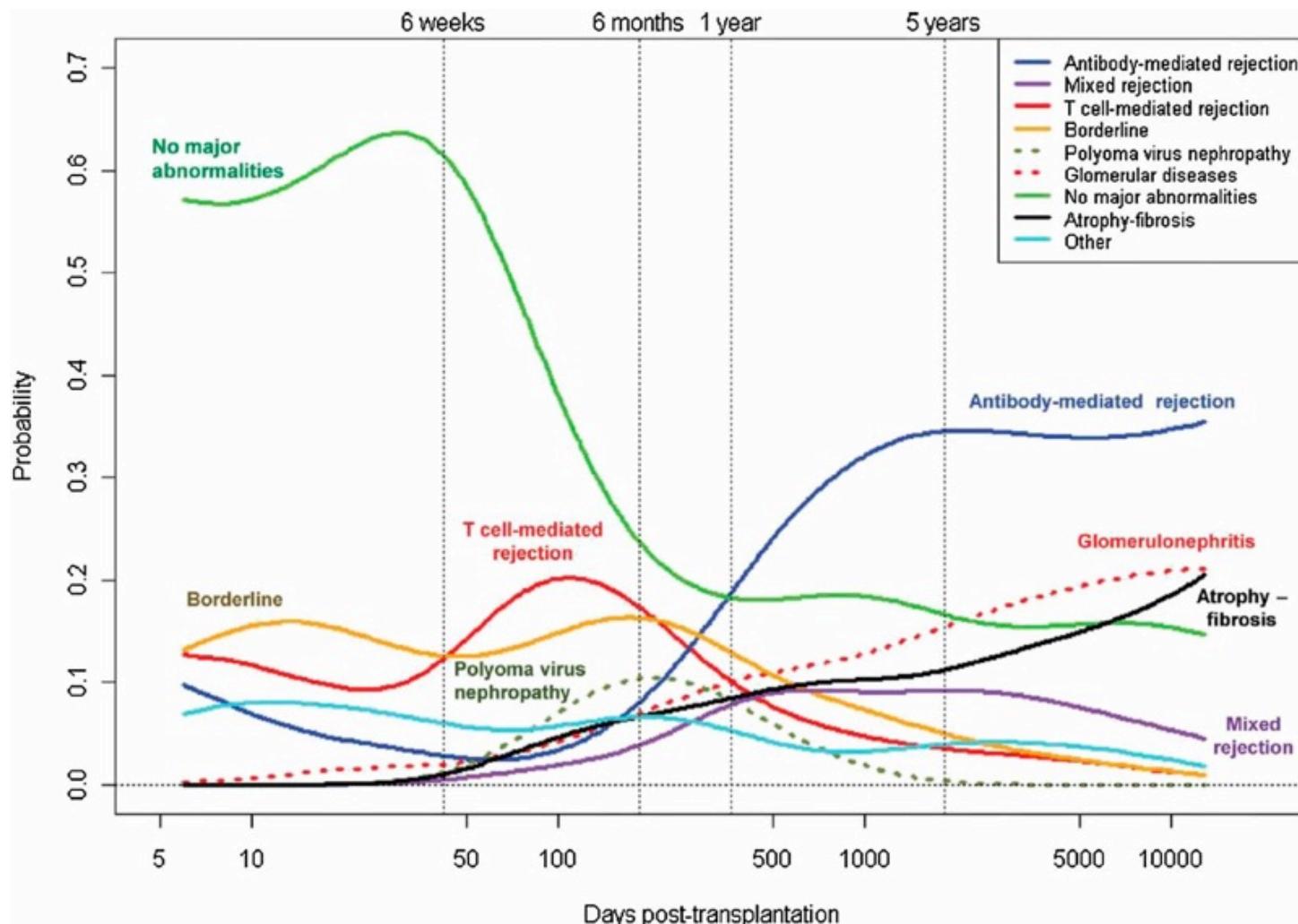
# Understanding the Causes of Kidney Transplant Failure: The Dominant Role of Antibody-Mediated Rejection and Nonadherence

J. Sellarés<sup>a,b</sup>, D. G. de Freitas<sup>a,b</sup>, M. Mengel<sup>a,c</sup>,  
J. Reeve<sup>a,c</sup>, G. Einecke<sup>d</sup>, B. Sis<sup>a,c</sup>, L. G. Hidalgo<sup>a,c</sup>,  
K. Famulski<sup>a,c</sup>, A. Matas<sup>e</sup> and P. F. Halloran<sup>a,b,\*</sup>

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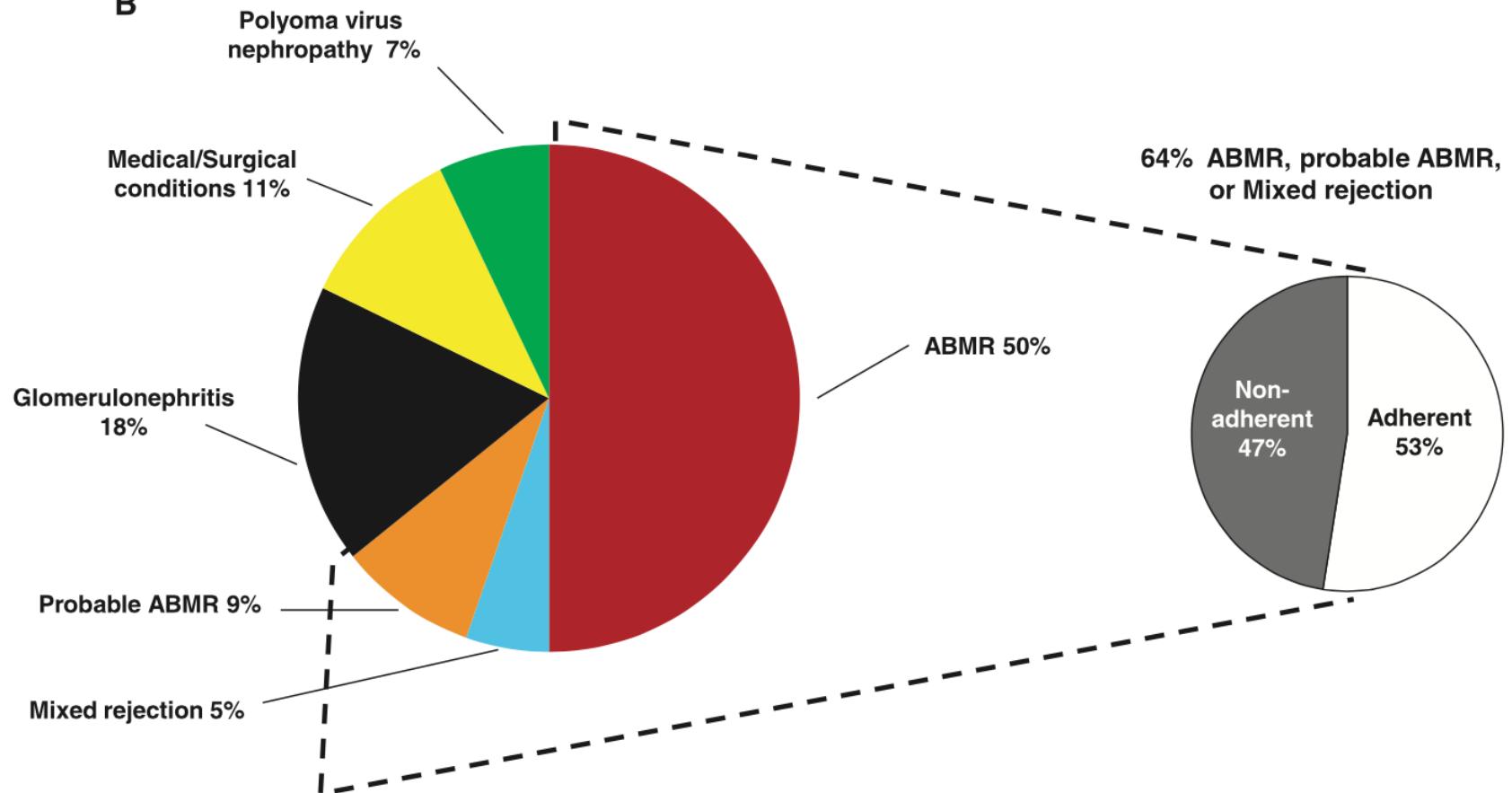
- Prospektiv observationsstudie 315 recipenter Ntx
- Transplantatsvikt n=60
- Indikationsbiopsi, F-U 31,4 m
- Diagnos av transplantatsvikt
  - histologi
  - HLA ak
  - kliniska data

# Causes of graft loss over time in biopsies for cause.



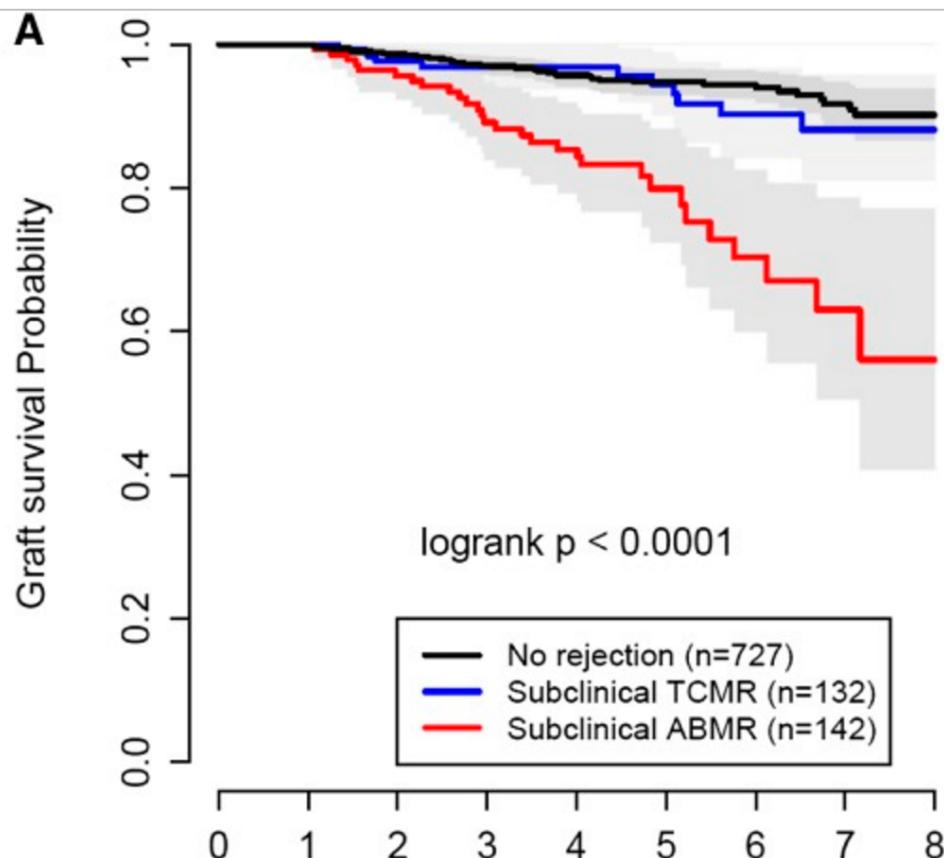
# Betydelse av non-adherence

B



## Subclinical Rejection Phenotypes at 1 Year Post-Transplant and Outcome of Kidney Allografts

Alexandre Loupy,<sup>§\*†</sup> Dewi Vernerey,<sup>\*‡</sup> Claire Tinel,<sup>†</sup> Olivier Aubert,<sup>\*</sup> Jean-Paul Duong van Huyen,<sup>\*§</sup> Marion Rabant,<sup>§</sup> Jérôme Verine,<sup>||</sup> Dominique Nochy,<sup>¶</sup> Jean-Philippe Empana,<sup>\*</sup> Frank Martinez,<sup>†</sup> Denis Glotz,<sup>\*\*</sup> Xavier Jouven,<sup>\*</sup> Christophe Legendre,<sup>\*†</sup> and Carmen Lefaucheur<sup>\*\*</sup>

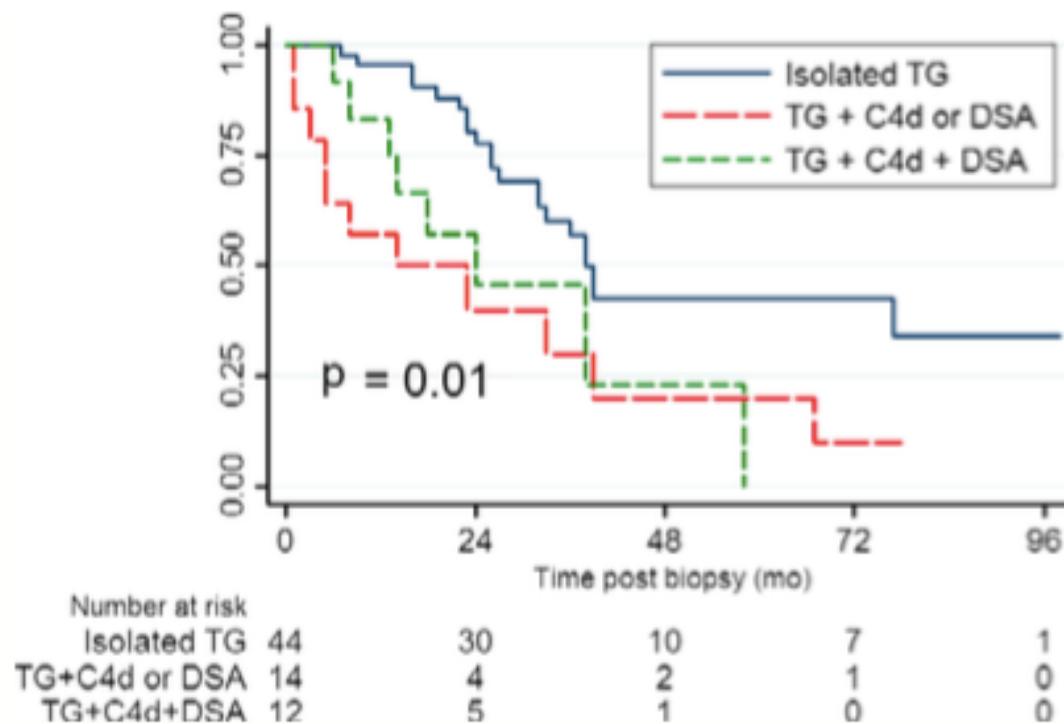


1-y protokolbiopsier  
n=1001; FU 4,6 y  
no rejection 73%  
s-TCMR 13%  
s-ABMR 14%

dnDSA 14% av s-ABMR

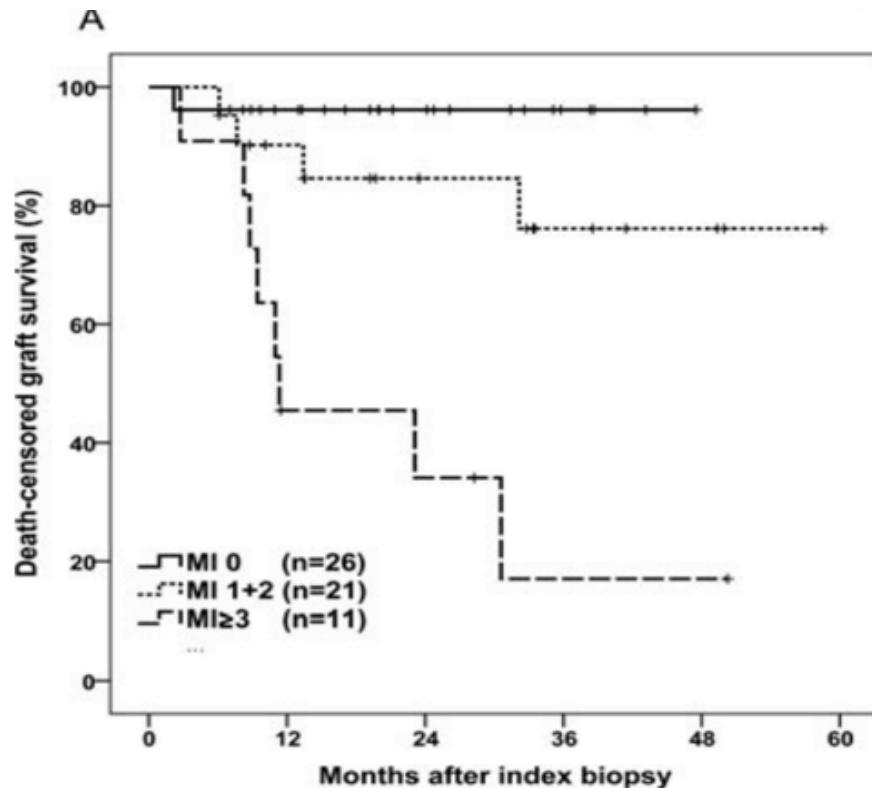
# Donor-Specific Antibodies, C4d and Their Relationship With the Prognosis of Transplant Glomerulopathy

Julie Lesage,<sup>1</sup> Réal Noël,<sup>1</sup> Isabelle Lapointe,<sup>1</sup> Isabelle Côté,<sup>1</sup> Eric Wagner,<sup>2</sup> Olivier Désy,<sup>1</sup> Yves Caumartin,<sup>3</sup> Mohsen Agharazii,<sup>1</sup> Ibrahim Batal,<sup>4</sup> Isabelle Houde,<sup>1</sup> and Sacha A. De Serres<sup>1</sup>



# Microcirculation Inflammation Associates With Outcome in Renal Transplant Patients With *De Novo* Donor-Specific Antibodies

H. de Kort<sup>a</sup>, M. Willicombe<sup>b</sup>, P. Brookes<sup>c</sup>,  
K. M. Dominy<sup>a</sup>, E. Santos-Nunez<sup>c</sup>,  
J. W. Galliford<sup>b</sup>, K. Chan<sup>b</sup>, D. Taube<sup>b</sup>,  
A. G. McLean<sup>b</sup>, H. T. Cook<sup>a</sup> and C. Roufosse<sup>a,\*</sup>



**Table 3:** Banff 97 diagnostic categories for renal allograft biopsies—Banff'07 update <sup>1,2</sup>

**1. Normal**

**2. Antibody-mediated changes** (may coincide with categories 3, 4 and 5 and 6)

Due to documentation of circulating antidonor antibody, and C4d<sup>3</sup> or allograft pathology

C4d deposition without morphologic evidence of active rejection

C4d+, presence of circulating antidonor antibodies, no signs of acute or chronic TCMR or ABMR (i.e. g0, cg0, ptc0, no ptc lamination). Cases with simultaneous borderline changes or ATN are considered as indeterminate

Acute antibody-mediated rejection<sup>4</sup>

C4d+, presence of circulating antidonor antibodies, morphologic evidence of acute tissue injury, such as (Type/Grade):

I. ATN-like minimal inflammation

II. Capillary and/or glomerular inflammation (ptc/g >0) and/or thromboses

III. Arterial—v3

Chronic active antibody-mediated rejection<sup>4</sup>

C4d+, presence of circulating antidonor antibodies, morphologic evidence of chronic tissue injury, such as glomerular double contours and/or peritubular capillary basement membrane multilayering and/or interstitial fibrosis/tubular atrophy and/or fibrous intimal thickening in arteries

**3. Borderline changes:** 'Suspicious' for acute T-cell-mediated rejection (may coincide with categories 2 and 5 and 6)

This category is used when no intimal arteritis is present, but there are foci of tubulitis (t1, t2 or t3) with minor interstitial infiltration (i0 or i1) or interstitial infiltration (i2, i3) with mild (t1) tubulitis

**4. T-cell-mediated rejection** (TCMR, may coincide with categories 2 and 5 and 6)

Acute T-cell-mediated rejection (Type/Grade):

IA. Cases with significant interstitial infiltration (>25% of parenchyma affected, i2 or i3) and foci of moderate tubulitis (t2)

IB. Cases with significant interstitial infiltration (>25% of parenchyma affected, i2 or i3) and foci of severe tubulitis (t3)

IIA. Cases with mild-to-moderate intimal arteritis (v1)

IIB. Cases with severe intimal arteritis comprising >25% of the luminal area (v2)

III. Cases with 'transmural' arteritis and/or arterial fibrinoid change and necrosis of medial smooth muscle cells with accompanying lymphocytic inflammation (v3)

Chronic active T-cell-mediated rejection

'chronic allograft arteriopathy' (arterial intimal fibrosis with mononuclear cell infiltration in fibrosis, formation of neo-intima)

**5. Interstitial fibrosis and tubular atrophy**, no evidence of any specific etiology

(may include nonspecific vascular and glomerular sclerosis, but severity graded by tubulointerstitial features)

Grade

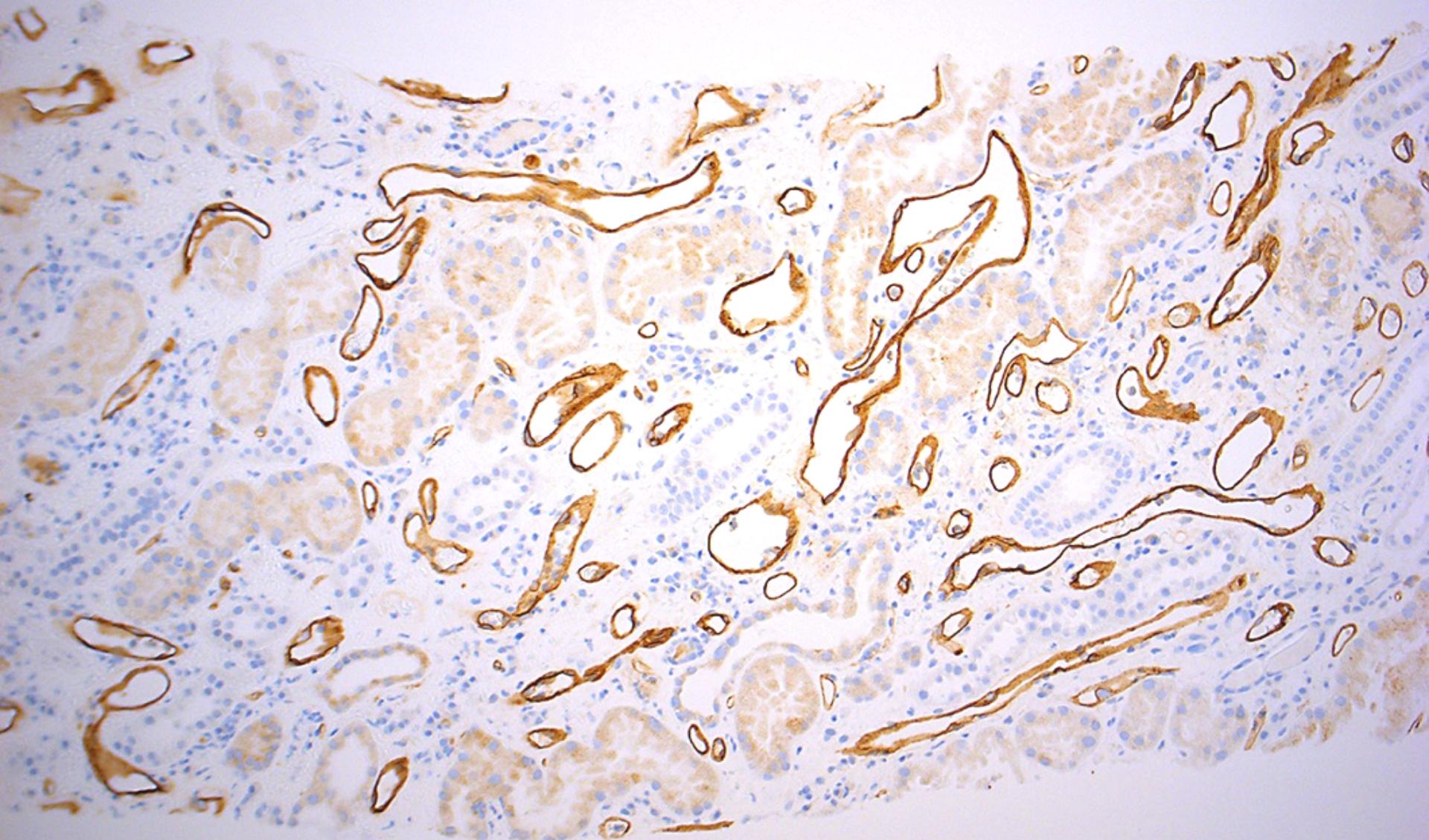
I. Mild interstitial fibrosis and tubular atrophy (<25% of cortical area)

II. Moderate interstitial fibrosis and tubular atrophy (26–50% of cortical area)

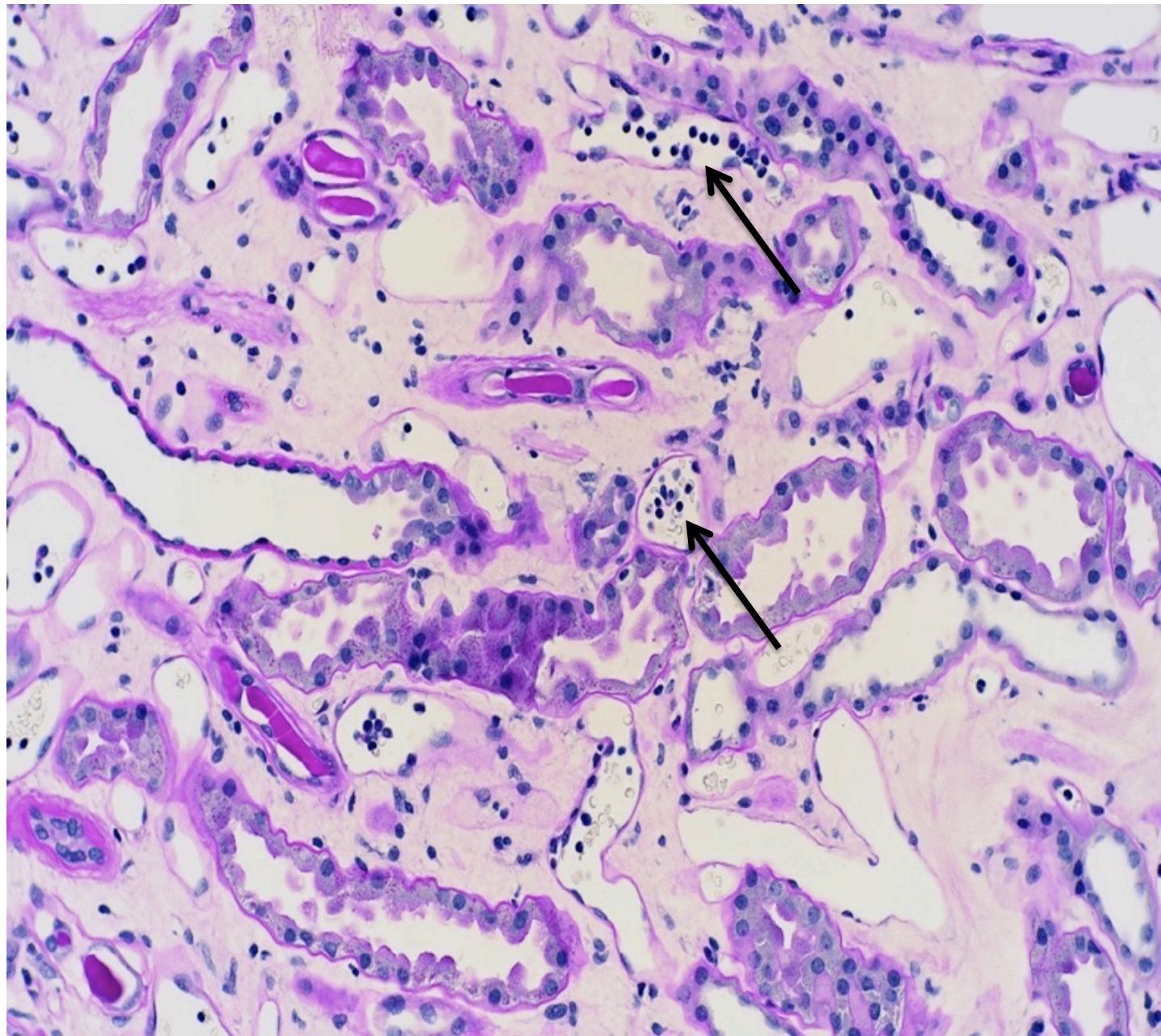
III. Severe interstitial fibrosis and tubular atrophy/ loss (>50% of cortical area)

**6. Other:** Changes not considered to be due to rejection—acute and/or chronic (for diagnoses see Table 14 in (42); may include isolated g, cg or cv lesions and coincide with categories 2, 3, 4 and 5)

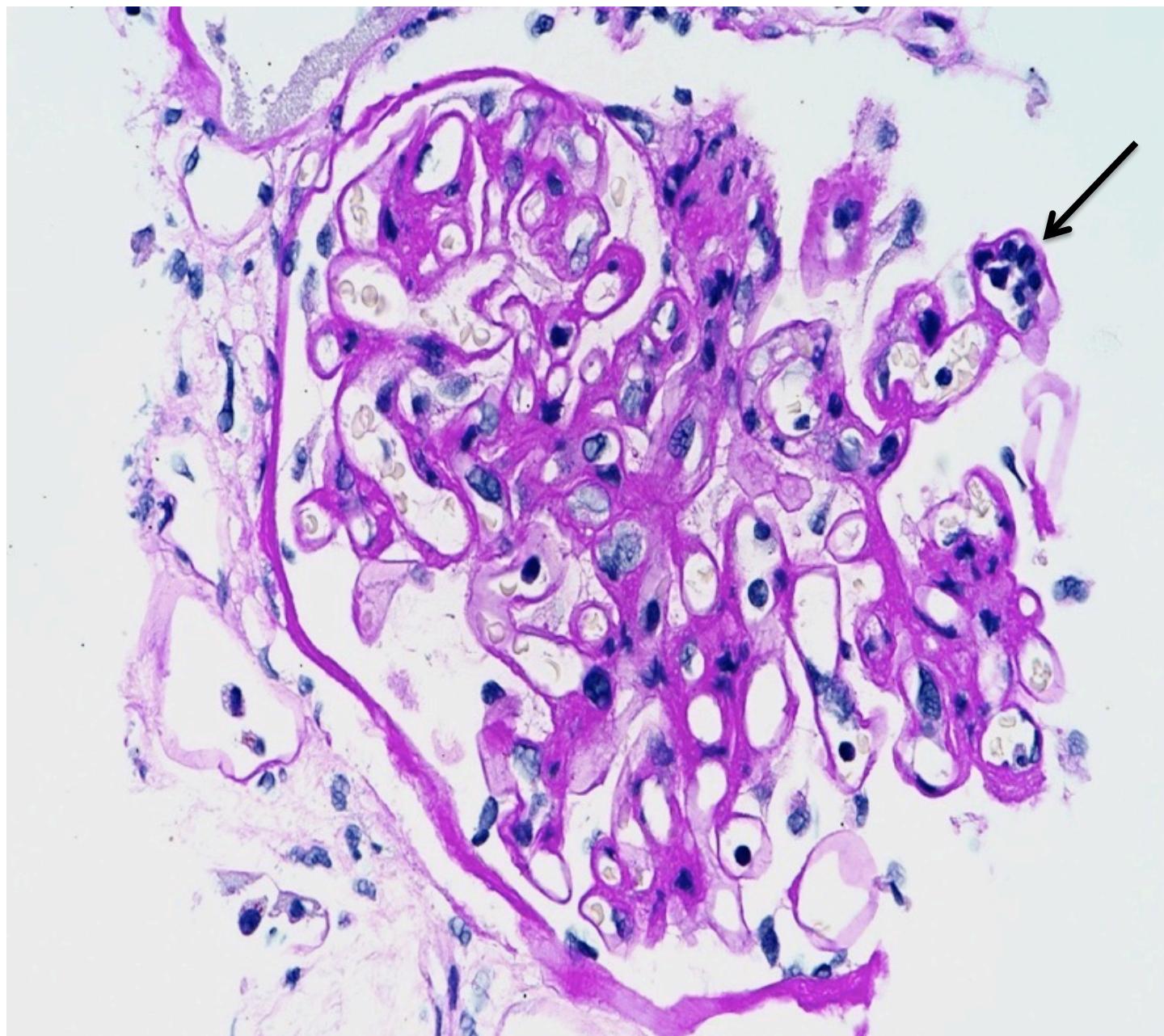
C4d



## Inflammation I små blodkärl - Peritubulära kapillärer

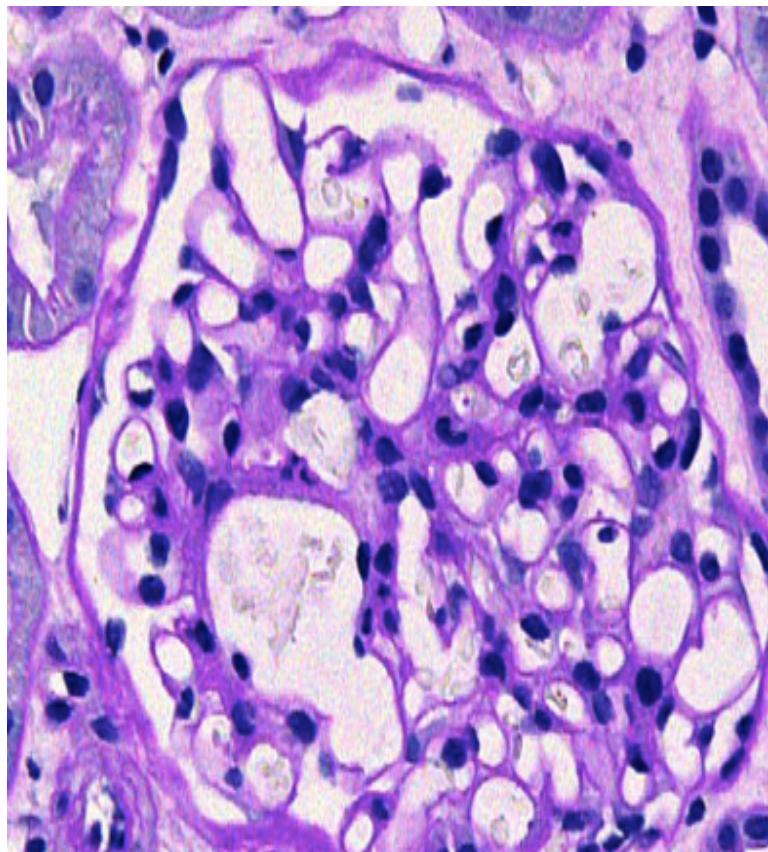


## Inflammation i små blodkärl - Glomerulära kapillärer



# TGP

Normal glumeruli



TGP-Transplantat GlomeruloPati

