Supplementary material

Table 1. Functional imaging techniques.

Method	Pros	Cons	Source
99mTc-MDP bone scintigraphy	Easily available. Can help define a region for a biopsy.	Non-specific and low sensibility: incomplete visualization of deposits; not possible to distinguish periarticular amyloid deposition and arthropathies of different origins.	Sethi 1990 Floege 2001 Ketteler 2001
Gallium-67 SPET Thallium-201 SPET	Detection of inflammatory lesions. Helpful for differentiating active from inactive deposits and for distinguishing articular-periarticular lesions from bone lesions.	These techniques label inflammatory changes and are not specific for amyloid-induced arthropathy.	Yen 2000
SAP scintigraphy (123I labelled)	The tracer accumulates in B2M amyloid deposits.	Uncertainties about specificity and sensibility: low accumulation in hips and shoulders. Spleen frequently labelled, while it is usually spared by B2M amyloidosis.	Tan 1999
β_2m scintigraphy: β_2m labelled 131I	High specificity demonstrated by tracer enrichment in amyloid fibrils. Good correlation between clinical/radiological and scan findings.	Elevated radiation exposure and low resolution of deposits in small joints. Not reliable in the presence of residual renal function.	Schäffer 2000
β_2m labelled 111In rh β_2m labelled 111In	In comparison with 131I : improved image quality and sensitivity. reduction in radiation exposure. -Safe and stable protein source -Scan specificity maintained -Enhanced sensibility -Lower radiation exposure	Not widely available.	Ketteler 2001
FDG-PET	Can demonstrate areas of amyloid deposition through peri-articular inflammatory changes. Widely available.	Non-specific, does not allow discrimination between DRA and other causes of periarticular and articular inflammation.	Kecler-Pietrzyk 2014 Piccoli 2017

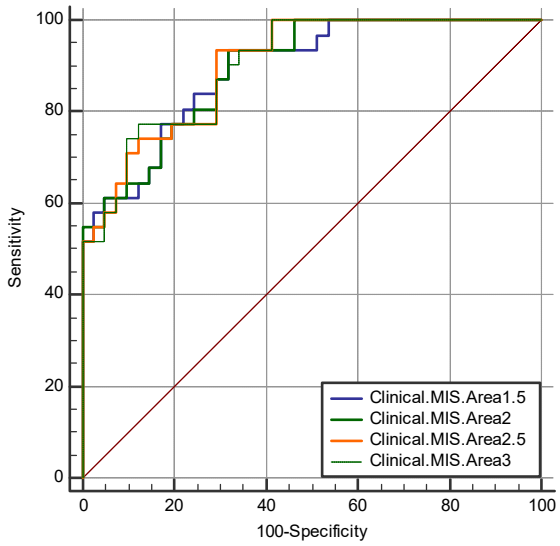
Supplementary Table 1: scintigraphic and nuclear medicine imaging methods employed for the detection of dialysis- related amyloidosis.

References

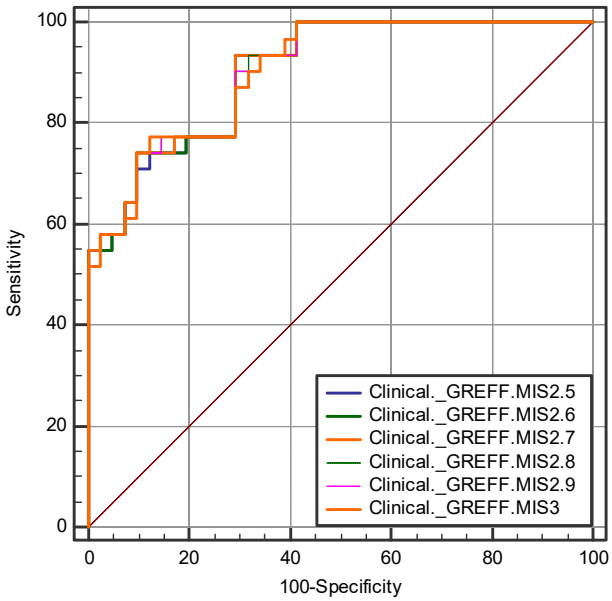
1. Sethi, D., Naunton Morgan, T. C., Brown, E. A., Jewkes, R. F. & Gower, P. E. Technetium-99-labelled methylene diphosphonate uptake scans in patients with dialysis arthropathy. Nephron. 1990 Mar;54, 202–207.

2. Floege J, Schäffer J, Koch KM. Scintigraphic methods to detect Beta 2-microglobulin associated amyloidosis (A Beta 2-microglobulin amyloidosis). Nephrol Dial Transplant. 2001;16 Suppl 4:12-6.
3. Ketteler M, Koch KM, Floege J. Imaging techniques in the diagnosis of dialysis-related amyloidosis. Semin Dial. 2001 Mar-Apr;14(2):90-3.
4. Yen TC, Tzen KY, Chen KS, Tsai CJ. The value of gallium-67 and thallium-201 whole-body and single-photon emission tomography images in dialysis-related Beta 2-microglobulin amyloid. Eur J Nucl Med. 2000 Jan;27(1):56-61.
5. Tan SY, Baillod R, Brown E, Farrington K, Soper C, Percy M, Clutterbuck E, Madhoo S, Pepys MB, Hawkins PN. Clinical, radiological and serum amyloid P component scintigraphic features of Beta 2-microglobulin amyloidosis associated with continuous ambulatory peritoneal dialysis. Nephrol Dial Transplant. 1999 Jun;14(6):1467
6. Schäffer J, Burchert W, Floege J, Gielow P, Kionka C, Linke RP, Weiss EH, Shaldon S, Koch KM. Recombinant versus natural human 111In-Beta 2-microglobulin for scintigraphic detection of Abeta2m amyloid in dialysis patients. Kidney Int. 2000 Aug;58(2):873-80
7. Kecler-Pietrzyk A, Kok HK, Lyburn ID, Torreggiani WC. Dialysis related amyloidarthropathy on FDG PET-CT. Ulster Med J. 2014 May;83(2):117-8
8. Piccoli GB, Hachemi M, Molfino I, Coindre JP, Boursot C. Doxycycline treatment in dialysis-related amyloidosis: discrepancy between antalgic effect and inflammation, studied with FDG-positron emission tomography: a case report. BMC Nephrol. 2017 Sep 6;18(1):28.

Supplementary Figures



Variables	AUC (CI)
Clinical MIS*1.5	0.895 (0.800 - 0.955)
Clinical MIS*2	0.896 (0.802 - 0.956)
Clinical MIS*2.5	0.903 (0.810 - 0.960)
Clinical MIS*3	**0.904 (0.811 - 0.961)**



Variables	AUC (CI)
Clinical.MIS*2.5	0.903 (0.810 - 0.960)
Clinical.MIS*2.6	0.904 (0.811 - 0.961)
Clinical.MIS*2.7	**0.906 (0.813 - 0.962)**
Clinical.MIS*2.8	0.904 (0.811 - 0.961)
Clinical.MIS*2.9	0.903 (0.810 - 0.960)
Clinical.MIS*3	0.904 (0.811 - 0.961)

Figure S1. a) Empirical identification of the combined score. The MIS, multiplied by different factors, is added to the clinical amyloid score; b) Empirical identification of the combined score.

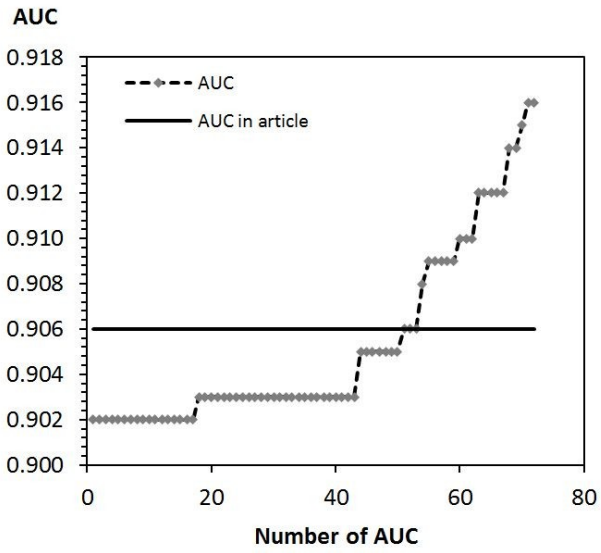


Figure S2. Leave-one-out validation.