albumin levels after two infusions of rituximab, without the need for additional haematological chemotherapy, and the sustained complete remission of nephrotic syndrome after 2 years of follow-up, strongly suggest that the nephrotic-range proteinuria was mostly due to glomerular damage related to MN rather than to AL amyloid deposits.

In conclusion, optimal management of renal progression in patients with AL amyloidosis remains challenging after haematological treatment. Careful nephrological investigations, in addition to the standard haematological tests, are required in patients with successful treatment of AL amyloidosis and worsening of laboratory renal parameters. In such patients, kidney biopsy should be systematically discussed to investigate potential alternative glomerular diseases.

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Spindle cell lipoma with lipofibromatosis-like change: expanding the spectrum of morphological heterogeneity

To the Editor,

Spindle cell lipoma (SCL) is a benign adipocytic neoplasm, first reported by Enzinger in 1975.¹ It most frequently occurs in the neck, shoulders and back region of middle-aged males. Histologically it is characterised by variable amounts of bland spindle cells, mature adipocytes, and ropy collagen bundles, described as thick, refractile and eosinophilic.² Despite this characteristic triad of histological features, it is well recognised that SCL can display diverse morphological heterogeneity, and multiple pathological subtypes have been described. Indeed, the morphological features can show some overlap with other benign and malignant soft tissue tumours, presenting a potential diagnostic dilemma. In this report, we describe a case of SCL showing lipofibromatosis-like change, morphological changes that to our knowledge have not been reported in the literature to date.

A 48-year-old man presented with a mass localised to the left occiput. An ultrasound scan was performed revealing a lesion measuring 32×29×17 mm with features suggestive of a lipoma. A subsequent excision was performed by the patient's GP. Pathological examination of the specimen received showed pieces of yellow to tan tissue with a uniform appearance and cut surface and no evidence of haemorrhage or necrosis. Microscopically, the sections showed mature adipose tissue with lobularity and intervening incomplete fibrous septa composed of long sweeping fascicles of spindle cells. These cells contained bland, elongate and frequently

Fig. 1 (A) Spindle cell lipoma showing lipofibromatosis-like growth pattern (H&E); (B) positive CD34 staining in the spindle cell component; (C) loss of nuclear staining with RB1.

buckled nuclei with no pleomorphism or hyperchromasia. These areas imparted a lipofibromatosis-like appearance (Fig. 1A). Further sections from the lesion were microscopically examined, leading to more conventional histological features, consistent with a diagnosis of SCL (Fig. 2).

Throughout the lesion, the spindle cells showed positive cytoplasmic staining with CD34 (Fig. 1B). Focal weak

Fig. 2 Spindle cell lipoma with conventional morphological features (H&E).

nuclear staining was present with S100. There was loss of nuclear staining with RB1 in both the lipofibromatosis-like areas as well as the conventional SCL areas (Fig. 1C). Negative staining was seen with both β -catenin and PAN-TRK antibodies.

SCL is a benign adipocytic tumour which accounts for approximately 1.5% of all adipocytic neoplasms.² It most commonly occurs in middle aged males with <10% of cases occurring in female patients. Approximately 80% of cases arise within the subcutis of the posterior neck, back and shoulders, however various other locations are well described in the literature.³ Conservative excision is usually adequate treatment. Metastases do not occur and local recurrence is rare, even in the setting of incomplete excision.²

Histologically, SCL is characterised by a triad of features including bland spindle cells, mature adipocytes and ropy collagen bundles. Despite these typical features, there are numerous morphological variants of SCL described in the literature including but not limited to the myxoid, fat-poor, (pseudo)angiomatous and plexiform subtypes in addition to SCL with focal cartilaginous and osseous metaplasia and SCL with extramedullary haematopoiesis. Indeed, SCL also lies on a morphological spectrum with pleomorphic lipoma (PL) which is characterised by pleomorphic spindle cells and floret-like giant cells that characteristically stain positive for CD34.²

Both SCL and PL are characterised by partial or whole chromosome 13 and/or 16 deletions. Described breakpoints in 13q deletions cluster around the region 13q14, where the RB1 gene is located.⁴ For this reason, immunohistochemical staining for RB1 can act as a surrogate marker in the diagnosis of SCL/PL. Loss of RB1 can be especially helpful in making the diagnosis of SCL in the setting of variant morphology, as illustrated in this case.

In this case, we describe a rare variant of SCL showing lipofibromatosis-like changes, a novel morphological finding in the setting of SCL. Lipofibromatosis is a rare soft tissue neoplasm affecting the paediatric population, with half of all cases being diagnosed before the age of 12 months. Up to 20% of cases are congenital. First described in 2000, lipofibromatosis presents as a slow-growing subcutaneous nodule in the distal extremities, particularly the hands and feet,⁵ with an even distribution among male and female patients.⁶ Although lipofibromatosis has no known metastatic potential, it may display locally aggressive features including diffuse and infiltrative growth patterns. Local recurrence is seen in up to 70% of cases.⁷

A diagnosis of lipofibromatosis can only be made on histological grounds. It is characterised by mature adipose tissue traversed by cellular fascicles of spindle cells with bland, uniform, elongated nuclei, features similar to those seen in our case. The immunohistochemical profile is non-specific with spindle cells showing variable expression of CD34 and SMA and negative staining with desmin. Molecular studies have identified several gene fusions encoding receptor tyrosine kinases or their ligands, suggesting a shared deregulation of the PI3K-AKT-mTOR pathway which may be implicated in its pathogenesis.⁸ Despite this, no robust or reproducible molecular target has been identified to date.

Also to be considered in the differential diagnosis is lipofibromatosis-like neural tumour (LPF-NT), an entity that exists within the emerging spectrum of NTRK-rearranged spindle cell neoplasms, included in the most recent edition

of the World Health Organization (WHO) classification.⁹ This is a rare soft tissue neoplasm, with the majority of cases occurring in the first two decades of life, however it has also been described in middle aged adults.¹⁰ They can present as superficial or deep tumours in the extremities or trunk region. Benign LPF-NT show a significant rate of recurrence, owing to the infiltrative growth pattern seen histologically, with no metastases described. However, metastasis has been reported in tumours showing high-grade morphological features.⁹

NTRK-rearranged spindle cell neoplasms are an evolving entity within which a spectrum of morphological features are seen. LPF-NT is characterised histologically by haphazardly arranged fascicles of spindle cells that show an infiltrative growth pattern within subcutaneous fat, resembling lipofibromatosis. The cells contain monomorphic nuclei with tapering poles and indistinct cytoplasm. Most cases of LPF-NT show co-expression of CD34 and S100, as in this case. Most tumours characteristically show NTRK1 fusions, although small numbers of cases showing NTRK2 or NTRK3 fusions have also been described.⁹ These gene fusions underpin the oncogenic activation of downstream tyrosine kinase proteins.¹¹ Thus, the majority of these lesions are reactive with an anti-pan-TRK monoclonal antibody.

In summary, we describe a case of a SCL showing lipofibromatosis-like changes. These changes can lead to a differential diagnosis including SCL, lipofibromatosis and LPF-NT. The clinical setting and immunohistochemical findings (particularly loss of RB1 nuclear staining and negative staining with PAN-TRK) is consistent with a diagnosis of SCL. In addition, the examination of further tissue sections and finding of more conventional morphological features of SCL strengthens the diagnosis. This is an important distinction owing to the increased risk of recurrence and aggressive local growth associated with lipofibromatosis and LPF-NT. Pathologists should be conscious of the morphological spectrum seen in SCL, taking care to correlate with the clinical setting and immunohistochemical findings in order to avoid misdiagnosis.

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Local genomic sequencing enhances COVID-19 surveillance in the Northern Territory of Australia

To the Editor,

Genomic sequencing has played a critical role in the global public health response to COVID-19. Within days of the first reported cases of pneumonia of unknown aetiology in Wuhan, the novel coronavirus now known as SARS-CoV-2 was identified by metagenomic sequencing and made publicly available, enabling rapid development of sensitive and specific diagnostic tests and development of effective vaccines.¹ Genomic sequencing is now a gold standard component of 'precision public health', with surveillance applications including outbreak investigation, identification of emerging variants of concern, and estimation of transmission dynamics.^{2–4} In 2020, the AusTrakka platform developed by the Communicable Disease Genomics Network was launched for data sharing and centralised pathogen genomic analysis across Australia and New Zealand,⁵ and all jurisdictions now have capacity to sequence and submit SARS-CoV-2 genomes.

SARS-CoV-2 variants of concern associated with increased transmissibility, increased virulence, and/or immune evasion, have been defined by the World Health Organization (WHO). In April–May 2021, SARS-CoV-2 lineage B.1.617.2 (Delta) caused a surge in cases in India, subsequently becoming the dominant SARS-CoV-2 lineage globally.⁶ In late November 2021 there was a rapid increase in SARS-CoV-2 lineage B.1.1.529 case numbers in Gauteng province, South Africa, displacing Delta as the dominant strain.⁷ B.1.1.529 is phylogenetically distinct from other variants of concern and has many mutations predicted to be associated with immune evasion and increased transmissibility.⁸ This lineage was designated the Omicron variant of concern by WHO on 26 November 2021.

The Northern Territory (NT) is a sparsely populated and geographically remote Australian jurisdiction, with a population of 245,000 and an area of over a million square kilometres. Approximately one-third of the population are Australian First Nations people, almost three-quarters of whom live in remote regions.⁹ To mitigate the risk of