Tumour lysis syndrome (TLS) risk factors

Tumour lysis syndrome most commonly occurs after commencing systemic anticancer treatment but can also occur spontaneously in highly proliferative diseases or following radiation therapy.

TLS can develop rapidly, result in serious and potentially life threatening consequences if not corrected and is considered an oncological emergency.

Risk factors for developing TLS include:

- high white cell count
- increased lactate dehydrogenase (LDH)
- high tumour cell proliferation rate
- bulky disease
- chemo-sensitive malignancies
- high intensity or highly potent therapy
- novel or targeted therapy used alone or in conjunction with conventional cytotoxic agents, even in patients with low-grade disease.

Malignancies associated with a higher risk of TLS include:

- Burkitt lymphoma/leukaemia
- acute lymphoblastic leukaemia
- lymphoblastic lymphoma
- diffuse large-cell lymphoma
- solid tumours with high proliferative rate and rapid response to therapy.

Additional conditions that may predispose patients to developing TLS:

- renal impairment
- decreased urinary flow
- pre-existing uraemia or hyperuricaemia
- dehydration
- hyperphosphataemia