REGULATION 28: REPORT TO PREVENT FUTURE DEATHS.

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** • The Secretary of State for Health and Social Care, the Rt Honourable Jeremy Hunt MP • The Chief Executive of NHS England, Mr Simon Stevens
1	**CORONER** I am Anthony Mazzag H M Assistant Coroner for the area of Manchester City
2	**CORONER'S LEGAL POWERS** I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and regulations 28 and 29 of the Coroners (Investigations) Regulations 2013
3	**INVESTIGATION and INQUEST** On 13th July 2017, an investigation was commenced into the death of **Lindsey Tyrrell** who died at the Christie Hospital, Withington, Manchester on 3rd July 2017 She was 41 years of age I concluded the Inquest on 28th June 2018 I found the following as the medical cause of death - 1a Fulminant central nervous system toxoplasmosis 1b Immunosuppression 1c Treated B-cell Acute Lymphoblastic Leukaemia My conclusion was - Narrative Complications, namely an untreated infection which remained unidentified prior to death, arising from necessary lifesaving medical treatment
4	**CIRCUMSTANCES OF THE DEATH** In November 2014, Mrs Tyrell was diagnosed with B-cell Acute Lymphoblastic Leukaemia ('B-ALL') She was commenced on intensive chemotherapy which she tolerated well She achieved complete remission of her disease and was moved to maintenance therapy in September 2015 Unfortunately, in December 2016, it was noted that her bloods were deteriorating and marrow investigations revealed a relapse of her B-ALL At that stage, the only prospect for long term survival was an allogeneic stem cell transplant Accordingly, on 24th March 2017, Mrs Tyrell underwent an unrelated donor stem cell transplant She received appropriate immunosuppressive treatment and was therefore at high risk of developing an infection over the next 12 months

	At the beginning of June 2017, Mrs Tyrell presented at the Christie Hospital with headaches, a fever and an intermittent rash She had clearly developed an infection by that point Investigations were carried out to identify the nature of the infection However, no evidence of infection was found on routine blood testing She was also routinely scanned for evidence of infection in her brain but nothing abnormal was noted Mrs Tyrell continued to deteriorate On 21st June a lumbar puncture test was performed but no infection was found in the cerebrospinal fluid ('CSF') Over the course of 27th June to 29th June, there was a significant deterioration in Mrs Tyrell's condition and by 30th June, the prognosis was terminal She passed away on 3rd July 2017 Following her death, the Christie Hospital reanalysed the bloods taken during the course of Mrs Tyrell's last admission to hospital It was found that her blood samples from 5th June 2017 onwards tested positive for toxoplasma The CFS from 21st June was also retested and found to be positive for toxoplasma
5	**CORONER'S CONCERNS** During the course of the Inquest the evidence revealed matters giving rise to concern In my opinion there is a risk that future deaths will occur unless action is taken In the circumstances it is my statutory duty to report to you The **MATTERS OF CONCERN** are as follows 1 I heard evidence at the Inquest that toxoplasmosis is carried by about 30% of the population, however, prior to Mrs Tyrell's death testing for this infection was not routinely carried out at the Christie Hospital on patients who had received an allogeneic stem cell transplant and who had subsequently presented with signs of infection I heard evidence that, following Mrs Tyrell's death, testing for toxoplasmosis is now undertaken at the Christie Hospital when stem cell transplant patients present in similar circumstances However, there was no evidence before me as to the practice of other specialist blood cancer care units or hospitals in similar circumstances It seems appropriate that the learning from this incident at a local level should be shared on a nationwide basis
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you and your organisation have the power to take such action
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report, namely by Tuesday 28 August 2018 I, the coroner, may extend the period Your response must contain details of action taken or proposed to be taken, setting out the timetable for action Otherwise you must explain why no action is proposed

8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to the following Interested Persons - • [redacted] Mrs Tyrell's wife I have also sent it to organisations who may find it useful or of interest - • The Christie Hospital, Withington, Manchester • The British Society of Blood and Marrow Transplantation I am also under a duty to send the Chief Coroner a copy of your response The Chief Coroner may publish either or both in a complete or redacted or summary form He may send a copy of this report to any person who he believes may find it useful or of interest You may make representations to me, the coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner
9	**Mr Anthony Mazzag**  **29th June 2018**