Table 1 - Risk stratification by body condition/disease

Condition	Very High Risk Advise MUST NOT fast	High Risk Advise should NOT fast	Low/Moderate Risk Decision to not fast based on discretion of medical opinion and ability of the individual to tolerate fast
	If patients in these categories wish to fast, is fasting shorter fasts in the winter a safe alternative? If not an option, or patients not willing to defer fasts and still wishing to fast, then they should be supported and should: • Receive structured education (where appropriate) • Be followed by an appropriate specialist/primary care contact whilst fasting • Monitor their health regularly • Adjust medication dose, frequency and timing as per recommendations • **Be prepared to break the fast/abstain from fasting in case of adverse events**		
Cardiovascular disease	• Advanced heart failure (optimal medical therapy, Left Ventricular Ejection Fraction <35%, with class III-IV NYHA symptoms, ≥1 hospitalisation in the last 6 month due to decompensated heart failure and severely impaired functional capacity (e.g. 6 min walk distance <300m) • Severe pulmonary hypertension (defined as WHO/NYHA III-IV classification, right ventricular dysfunction and objective markers on right heart catheterisation e.g. SvO2 <60%)	• Poorly controlled hypertension (as defined by your specialist) • Recent Acute Coronary Syndrome / myocardial infarction (<6 weeks) • Hypertrophic Obstructive Cardiomyopathy (HOCM) with significant left ventricular outflow tract gradient (e.g. peak gradient ≥50mmHg) • Severe valvular disease (defined by echocardiographic criteria) • Severe heart failure without advanced features • Poorly controlled arrhythmias (as defined by your specialist) • High risk of fatal arrhythmias (e.g. inherited arrhythmic syndromes, arrhythmogenic cardiomyopathy) • Implantable cardioverter defibrillator +/- cardiac resynchronisation therapy	• Stable hypertension • Stable angina (episodes of angina are not occurring at rest or increasing significantly in frequency or severity) • Mild heart failure with reduced ejection fraction (HFrEF) (Left Ventricular Ejection Fraction or LVEF ≥ 45%), Moderate HFrEF (LVEF 35 - 45%) or Heart Failure with preserved ejection fraction (HFpEF) (diagnosed by a combination of symptoms, LVEF ≥ 45-50%, Heart Failure Association score, natriuretic peptide levels +/- imaging - refer to specialist confirmation) • Implantable loop recorder • Permanent pacemaker (single or dual chamber) • Mild/mild-moderate valvular disease (as defined by echocardiographic criteria) • Supraventricular tachycardias/Atrial Fibrillation/Non sustained ventricular tachycardia • Mild/moderate Pulmonary Hypertension (Pulmonary Artery Systolic Pressure >25mmHg without severe echocardiographic or right heart catheterisation features)
	• *Patients with Grown-up Congenital Heart disease (GUCH) and/or Heart Transplant must consult their specialist for an individual risk assessment.*		
Respiratory disease	• Those experiencing an acute exacerbation of their chronic lung disease • Asthma/COPD sufferers at high risk of exacerbation and preventative inhaler timings cannot be altered to a fasting compatible regime	• Poorly controlled lung disease with frequent exacerbations/hospital admissions • Poorly controlled symptoms requiring frequent rescue inhaler and/or nebuliser use throughout the day • Those receiving immunosuppressants for active lung disease • Those receiving anti-fibrotic therapy	• Well controlled asthma/COPD requiring intermittent reliever inhaler use only • Stable disease with infrequent exacerbations • Those receiving immunosuppressants for stable disease (in remission)
Chronic kidney disease	• CKD patients in stage 4-5 with eGFR<30 ml/min** • Patients on all forms of hemodialysis and peritoneal dialysis • Pregnant CKD patients • CKD stage 3-5 patients with history of pre-existing cardiovascular disease • CKD patients on tolvaptan	• CKD patients in stage 1-3 with unstable kidney function* • CKD patients with known electrolyte abnormalities • Patients at risk of dehydration due to fluid restriction requirements or need for diuretics • Patients on ACE-I/ARB, SGLT2 inhibitors and mineralocorticoid receptor antagonists	• CKD patients in stages 1-3 with stable kidney function • CKD patients prone to urinary tract infections or stone formation

	CKD, Chronic Kidney Disease; ACE-I, Angiotensin Converting Enzyme inhibitor; ARB, Angiotensin Receptor Blocker; eGFR, estimated Glomerular Filtration Rate; SGLT2, sodium-glucose Cotransporter-2 *unstable patients would include those with rapidly declining GFR, history of fluid overload and frailty. **although HD and PD patients would be considered very high risk, a select group may be able to fast following risk stratification and counselling, factors to consider would include – residual renal function, fluid balance, potassium >6.0 mmol/L, motivation, compliance with medical advice, consider alternatives to fasting and winter fasting.		
Gastrointestinal disease	• Patients with established cirrhosis especially Child-Pugh B and C • Patients who are < 6months post Liver transplant • Patients with symptomatic active inflammatory bowel disease • Patients with significant acute or chronic diarrhoea • Patients with high output ileostomy	• Liver transplant patients taking Tacrolimus are at high risk of renal toxicity if they become dehydrated. They are also at risk of rejection if adherence to immunosuppression medication is not maintained due to fasting. • Patients on prednisolone at doses > 20mg per day	• Patients with Child A cirrhosis • Patients with stable chronic liver disease without cirrhosis • Patients with stable chronic inflammatory bowel disease in remission, including those on immunosuppressants • Patients with peptic ulcer disease, reflux oesophagitis and irritable bowel syndrome
Neurological disease	• Any condition predisposing to respiratory complications e.g. bulbar weakness, neuromuscular disorders* • Myasthenia Gravis on regular pyridostigmine more than 3 times per day • MND • Poorly controlled epilepsy, on multiple antiepileptic medications, history of status epilepticus • Parkinson's disease requiring regular levo-dopa • Neurodegenerative disorders with cognitive impairment	• Epilepsy requiring a medication regime incompatible with fasting which cannot be modified safely in time for Ramadan • Myasthenia gravis on pyridostigmine 3 times daily or less • Parkinson's disease with low requirement for levo-dopa in younger patients	• History of cerebrovascular disease, dependent on level of disability • History of MS, dependent on level of disability. See ABN guidance for management of immunosuppression during the COVID-19 pandemic • Well controlled epilepsy with medication regime compatible with length of fast • Myasthenia gravis not requiring pyridostigmine or purely ocular • Migraine
Diabetes [a]	**One or more of the following:** • Severe hypoglycaemia within the 3 months prior to Ramadan [b] • DKA within the 3 months prior to Ramadan • Hyperosmolar hyperglycaemic coma within the 3 months prior to Ramadan • History of recurrent hypoglycaemia • History of hypoglycaemia unawareness • Poorly controlled T1DM • Acute illness • Pregnancy in pre-existing diabetes or GDM treated with insulin • Chronic dialysis or CKD stage 4 & 5 • Advanced macrovascular complications • Old age with ill health • Type 2 diabetes requiring insulin (MDI or mixed insulin) with no prior experience of safe fasting	**One or more of the following:** • T2DM with sustained poor glycaemic control [c] • Well-controlled T1DM • Well-controlled T2DM on MDI or mixed insulin • Pregnant T2DM or GDM controlled by diet only or metformin • CKD stage 3 • Stable macrovascular complications • Patients with comorbid conditions that present additional risk factors • People with diabetes performing intense physical labour • Treatment with drugs that may affect cognitive function • Type 2 diabetes on SGLT-2 inhibitors (consider alternatives/stopping)*	**Well-controlled T2DM treated with one or more of the following:** • Lifestyle therapy • Metformin • Acarbose • Thiazolidinediones • Second-generation SUs (moderate risk, regular SMBG advised) • Incretin-based therapy (DPP-4 inhibitors or GLP-1 RAs) • SGLT-2 inhibitors • Basal Insulin (moderate risk, regular SMBG advised)
	If patients wish to fast, they should be supported and should: • Receive structured education • Be followed by a qualified diabetes team • Check their blood glucose regularly (SMBG) • Adjust medication dose as per recommendations • Be prepared to break the fast in case of hypo-or hyperglycaemia Be prepared to stop the fast in case of frequent hypo-or hyperglycaemia or worsening of other related medical conditions		
	Abbreviations: CKD – chronic kidney disease; DKA – diabetic ketoacidosis; DPP-4 – dipeptidyl peptidase-4-; GDM – gestational diabetes mellitus; GLP-1 RA – glucagon-like peptide-1 receptor agonist; MDI – multiple dose insulin; SGLT-2 – sodium-glucose co-transporter 2; SMBG – self-monitoring of blood glucose; SU – sulfonylurea; T1DM – Type 1 diabetes mellitus; T2DM – Type 2 diabetes mellitus.		
	Notes: [a] In all categories, people with diabetes should be advised to follow medical opinion due to probability of harm. The decision to fast is a personal decision for the person with diabetes, who should be supported by the healthcare professional (HCP) to achieve best possible outcomes. [b] Hypoglycaemia that is not due to accidental error in insulin dose.		

	[c] The level of glycaemic control is to be agreed upon between doctor and patient according to a multitude of factors. Consider HbA1c >75mmol/mol for over 12 months * risk upgraded in light of covid-19 pandemic		
Adrenal disease	• Multi-morbidity • Diabetes mellitus requiring insulin therapy • Co-existent pituitary (diabetes) insipidus • Adrenal crisis in last 12 months • Untreated mineralocorticoid deficiency • Untreated TSH deficiency	• Recent diagnosis of steroid dependence within last 3 months • Pregnancy	• Stable and well-controlled adrenal insufficiency • No significant co-morbidities • Treated mineralocorticoid deficiency (moderate risk)
Benign haematological disorders	• Sickle cell disease including HbSS, HbSC, HbS/Beta-Thal, HbSO, HbSD and those prone to sickle cell crisis. • Cold Haemagglutinin Disease with ongoing haemolysis • Amyloidosis with renal impairment • Antiphospholipid Syndrome with history of blood clots • Paroxysmal Nocturnal Haemoglobinuria with active haemolysis or history of recurrent thrombosis • Thrombophilias with history of recurrent thrombosis despite being on anticoagulation	• Warm Auto-Immune Haemolytic Anaemia with active haemolysis • Other Haemolytic Anaemias with active haemolysis • Clotting disorders like the thrombophilias with history of thrombosis • Aplastic anaemia on immunosuppression • Thrombophilia with a history of thrombosis within the last three months and are on anticoagulation.	• Thalassaemia carriers and sickle cell carriers who are not prone to crises • Aplastic Anaemia not on active treatment • White cell disorders with low count • Inherited Bleeding disorders • Immune Thrombocytopenias in remission • Thrombophilia with history of thrombosis on Anticoagulation
Haematological malignancies	• Patients requiring inpatient treatment for cancer or complications of cancer e.g. acute leukemias, high grade lymphomas, aggressive/refractory myeloma • Patients requiring inpatient treatment undergoing autologous or allogeneic stem cell transplantation or its complications • Patients requiring inpatient treatment for complications of cancer treatment e.g. neutropenic sepsis, severe vomiting, diarrhoea, pain and other symptoms • Newly diagnosed myeloma patients who are at risk of kidney injury	• Patients taking tacrolimus or ciclosporin where risk of kidney injury is increased by dehydration • Patients newly commenced on induction chemotherapy for hematological malignancies such as myeloma, lymphoma, chronic leukemias or experiencing significant side effects • Patients receiving oral chemotherapy or targeted therapy, that: ○ require twice daily dosing ○ must be taken with food ○ are experiencing significant side effects • Patients receiving a course of radiotherapy • Patients who have undergone autologous or allogeneic transplantation within the last 6 months • Patients receiving treatment for post transplant complications such as GVHD.	• Patients receiving oral chemotherapy or targeted therapy, if: ○ on a once daily dosing regime ○ drug pharmacokinetics allow fasting ○ well established (>3 cycles) on treatment ○ not experiencing significant side effects • Patients receiving outpatient parenteral chemotherapy beyond induction phase (except on drug administration days) if: ○ well established on treatment ○ no/few manageable side effects • Patients on parenteral maintenance Immunotherapies with no/few manageable side effects e.g. Rituximab, Obinutuzumab • Outpatients with haematological cancers who are not receiving any active treatment and are on active surveillance only e.g. MGUS, chronic leukemias, low grade lymphomas, • Patients with previously treated cancers who are currently in remission and on active surveillance
Rheumatological disease	• Active SLE with renal involvement • Active vasculitis with renal involvement • Low eGFR secondary to connective tissue diseases/vasculitis • Scleroderma leading to pulmonary hypertension	• Uncontrolled Gout • Higher dose of steroids >20mg/day*	• Rheumatological conditions in remission e.g. rheumatoid arthritis, polymyalgia rheumatica, connective tissue diseases and vasculitis. • Osteoarthritis • Osteoporosis • Sjogren's syndrome • Well controlled gout
Obesity	BMI>40kg/m2 with any of the following: • Established end-organ cardiovascular disease (e.g. previous myocardial injury, cardiac failure, previous CVA/TIA) • Advanced CKD (stage 4-5)	• BMI>40kg/m2 with complicated metabolic syndrome and related complications e.g. those associated with high risk conditions (diabetes,	• BMI>40kg/m2 with stable non-metabolic comorbidities (e.g. osteoarthritis, fibromyalgia) • Simple obesity without any comorbidities

	• Advanced chronic pulmonary diseases • Severe obstructive sleep apnoea	hypertension, dyslipidemia, PCOS, hypothyroidism)	
Pregnancy[d]	• Pregnancy with severe underlying maternal health conditions • Complicated pregnancy	• Uncomplicated pregnancy in an otherwise healthy woman in first trimester • Pregnancy with moderately severe underlying maternal health conditions	• Uncomplicated pregnancy in an otherwise healthy woman beyond first trimester • Pregnancy with mild/well controlled underlying maternal health conditions
Organ transplants	• Solid organ transplant recipients who underwent a transplant in the last 12 months • Patients on twice daily formulations of immunosuppression • Pregnant transplant patients • Transplant patients diagnosed with Post Transplant Diabetes Mellitus requiring twice daily oral hypoglycaemics or insulin treatment • Kidney transplant recipients with reduced kidney function (eGFR<30 ml/min) • Patients with unstable graft function, recent rejection episodes and opportunistic Infections • Liver transplant recipients with unstable graft function, decompensated liver disease or evidence of cirrhosis on biopsy	• Kidney transplant recipients with reduced graft function (eGFR 30-60ml/min) • Heart, lung, liver, small bowel, pancreas and multi-organ transplant recipients with reduced graft function • Patients at risk of dehydration due to fluid restriction requirements, need for diuretics or if they would be unable to meet their daily fluid intake requirement set by their transplant team	• Transplant patients not in the other categories. We would advise patients to discuss the suitability of fasting and monitoring necessary with their relevant transplant teams
Solid tumours	• Patients on clinical trials: drug trials often have specific requirements for patients to be fed or fasted when taking the experimental drug. These instructions must be fully adhered to, making fasting unsafe in this context. • Patients requiring inpatient treatment for their cancer (or complications of it) cannot fast safely, and should be advised not to do so. • Patients undergoing radical radiotherapy (especially for head and neck and upper GI malignancies) can experience serious side effects that severely limit oral intake with high risk of malnutrition; fasting would be unsafe. • Patients receiving immunotherapy: immune mediated toxicities of treatment (including endocrine dysfunction) can be unpredictable and sudden in onset, making fasting potentially dangerous.	• Patients receiving intravenous chemotherapy who have newly commenced their treatment regime, or are experiencing significant side effects • Patients receiving oral chemotherapy or targeted therapy that require twice daily dosing or must be taken with food, or are experiencing significant side effects • Patients receiving a course of radiotherapy (with or without chemotherapy) • Patients immediately following cancer surgery	• Patients receiving oral chemotherapy or targeted therapy may be able to fast if: ○ They are on a once daily dosing regime ○ The drug pharmacokinetics allow it to be taken whilst fasted ○ They are well established on treatment ○ They are not experiencing any side effects ○ Patients receiving intravenous chemotherapy may be able to fast (except on drug administration days) if: ○ They are well established on their treatment regime ○ They have no/few manageable side effects • Patients on intravenous biological therapies (eg trastuzumab, bevacizumab) who are not experiencing significant side effects may be able to fast on non-treatment days • Patients on endocrine therapy or androgen deprivation therapies who are not experiencing significant side effects, may be able to fast • Patients receiving palliative (single fraction) radiotherapy may be able to fast if their general fitness allows it • Patients under cancer surveillance, who are more than 3 months beyond completion of cancer therapies (including surgery) and have recovered sufficiently, may be able to fast
Mental health[e]	• Anorexia/bulimia nervosa with purging by vomiting; severe laxative abuse	• Stable bipolar/psychosis with medication regime compatible with fasting hours, >6m since relapse. Monitor during Ramadan	• Mild mental health illness not affecting functioning • Well controlled mental illness (no relapses in previous 12m) with previous history of safe fasting

	• Severe substance dependence disorder where stopping regime may cause harm • Medication dosing interval shorter than fasting hours, and necessary to prevent relapse/harm • Poorly controlled serious mental illness disorders (including clozapine use) • Risk of electrolyte imbalance (e.g. lithium or metformin) or medication out of range		

1. This is not an exhaustive list and is to be used for informative and shared decision making by healthcare professionals with patients. It does not form a directive. In all categories, patients should be advised to follow medical opinion due to probability of harm. Where appropriate, expert individualised medical advice must be sought before any decisions around fasting in Ramadan are made.
2. If a patient's condition is not on this table and they have uncertainty or concerns about fasting, then they should seek medical advice before doing so. If this is not possible and they decide to fast, the advice given regarding terminating the fast should be followed.
3. The **decision to fast is a personal decision for the individual concerned**, who should be supported to achieve best possible outcomes.
4. Consider upgrading risk if unable to seek timely medical attention and make necessary changes to medication regime, arrange baseline blood tests, or other preparation that usually precedes fasting, due to the effect of COVID-19 on health services.
5. Frailty is recognised by NICE as a predictor of worse outcome with COVID-19. Use the Rockwood clinical frailty score (CFS) to assist with making assessments on risks of fasting in frail patients. Also take caution with obesity (noting lower cut off for S.Asian patients) risk in COVID-19.
6. Ensure adequate hydration and nutrition; social distancing, isolation and shielding may be beneficial in this respect
7. In the context of the COVID-19 pandemic, episodes of illness should be taken seriously and strong consideration should be given to breaking the fast, as the onset of illness can be rapid. Recovery from COVID-19 may also be prolonged. See Figure 1 and section on acute illness for details.
8. Islamic jurists advise that any missed fasts should be made up in the future. However, if one's health takes a permanent decline such that even fasting during the winter period becomes unsafe or impossible, the fidyah would have to be paid. Patients should speak to a trusted religious authority before doing so.

* Expert-recommended upgrading of risk due to COVID-19. Recommendations subject to review if relevant evidence suggests re-grading
[d] For breastfeeding please refer to the MCB Ramadan Health Factsheet
[e] Issues relating to capacity are discussed in the General Principles section of this review