Investigations

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Guidelines produced by the UK’s National Institute for Health and Care Excellence (NICE) set out the investigations needed for various categories of elective surgery and American Society of Anesthesiologists (ASA) score of the patient. The following are some of the tests done preoperatively , although not all are done routinely or are recommended by NICE. /uni25CF Full blood count (FBC) . An FBC is needed for major operations, in the elderly and in those with anaemia or pathology with ongoing blood loss and chronic disease.

Figure 21.2 Ability to protrude jaw.

Figure 21.3 Normal head extension.

measured in patients with diabetes who have not had it measured in the last 3 months. /uni25CF Sickle cell test . Not routinely o ff ered, but in cases of suspicion of a sickle crisis or a family history of sickle cell disease a sickle cell test is needed. /uni25CF Urea and electrolytes (U&Es) . U&Es are needed before all major operations, in patients over 65 years of age, in patients with cardiovascular, renal or endocrine disease or if significant blood loss is anticipated. They are also needed in those on medications that a ff ect electrolyte levels, e.g. steroids, diuretics, digoxin, non-steroidal anti- inflammatory drugs, intravenous fluid or nutrition therapy , and in those with endocrine problems. /uni25CF Liver function tests . These are indicated in patients with jaundice, known or suspected hepatitis, cirrhosis, ma lignancy , alcohol excess or poor nutritional status. /uni25CF Clotting/coagulation screen . This is needed if a patient has a history suggestive of a bleeding diathesis, liver disease, eclampsia or cholestasis, is on antithrombotic or anticoagulant agents or has a family history of a bleeding disorder. It should be noted that the e ff ects of antiplatelet agents, low-molecular-weight heparins (LMWHs) and newer agents a ff ecting factor Xa cannot be measured by routine laboratory tests. /uni25CF Electrocardiogram (ECG) . This is required for pa tients over 65 years of age or symptomatic patients with a history of rheumatic fever, diabetes or cardiovascular, renal or cerebrovascular disease, with or without severe respiratory problems. It will also depend on whether the surgery is minor/intermediate or major, as described in NICE guidance. /uni25CF Chest radiograph . Not routinely o ff ered unless there is concern on clinical examination. /uni25CF Echocardiogram (echo) . Consider in those with heart murmurs who are symptomatic or in those with signs of heart failure. /uni25CF Urine tests . Only consider microscopy and culture of midstream urine if infection would influence the decision to operate. /uni25CF β -Human chorionic gonadotrophin (pregnancy test) . Women of childbearing age should be asked sen sitively about their pregnancy status as this will a ff ect the surgical plan and consent. Pregnant patients must be con sented for the risk to a fetus that surgery and anaesthetic pose, and obstetric advice sought. In addition, on the day of surgery the woman should be

consented for a urine/ serum pregnancy test. /uni25CF Others : /uni25CF Venous bicarbonate . For patients who have screened as being at high risk for obstructive sleep ap noea (OSA). Followed by formal sleep studies if signifi cant OSA is a concern. /uni25CF Arterial blood gases . A low-cost tool that can give quick and vital information in acute or chronic severe respiratory conditions, acid–base disturbances and conditions where there is a changing milieu, e.g. immediately before kidney transplant. loss >500 /uni00A0 mL. /uni25CF Methicillin-resistant Staphylococcus aureus (MRSA) swabs. /uni25CF Coronavirus 2019 (COVID-19) polymerase chain reaction (PCR) swabs. /uni25CF Spirometry . /uni25CF Cardiopulmonary exercise testing to assess fit- ness for high-risk surgery . /uni25CF Specialist radiological views are sometimes re - quired. If imaging is going to be needed during sur - gery , this needs to be planned in advance. Investigations

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