

### Cancer screenings

|        | Screening test   | Cancer   | Purpose   | Suggested interval   | Risks   | Notes   | Look for...   |
|--------|--|--|---|--|---|---|---|
| All    | 1. FIT/FOB<br>2. Colonoscopy   | Colorectal (CRC)   | Fecal test is detection too<br>Colonoscopy is prevention (polyp removal)                    | Annual for FIT/FOB<br>3-5 years for colonoscopy  | Perforation (1~/1500)<br>Bleeding (1~/750)<br>Anaesthesia complications   | CRC grows slowly (8+ years), and polyp removal is curative.<br>Colonoscopy is strongest preventive screening tool in medicine.<br>Screening every 10 years reduces death by up to 75%.<br>FIT/FOB are reasonable for detecting more advanced tumours, but not "early" detection like colonoscopy.                                     | Look for blood in stool, new constipation, new diarrhoea, "pencil poops", iron deficiency anaemia, unexplained loss of appetite. Emphasis on new, persistent and progressive changes. Often a very "quiet" disease until advanced. Colonoscopy takes precedence.  |
|        | Gastroscopy<br>Can include <i>H.pylori</i> breath test too                                   | Gastric/Esophageal   | Risk stratification, detection  | Once at ~40, then every 10 yrs if normal   | Perforation (1~/10,000)<br>Bleeding<br>Dental injuries<br>Sore throat, gassy  | Gastric grows slowly (gastritis to metaplasia to tumour >10 years). Shorten interval if gastritis or metaplasia identified. Miss rate ~9%. Esophageal can be faster, but mostly if Barrett's (0.3% per year). If no Barrett's, risk is extremely low.   | Can be subtle or asymptomatic.<br>Heartburn, bloated after eating, early satiety.<br>Red flags: difficulty swallowing, weight loss  |
|        | Alpha feto-protein (AFP) blood test.<br>PIVKA blood test.<br>Abdominal ultrasound (optional) | Liver (HCC)  | Early detection, potential cure   | Depends on risk factors (HBV/HCV, cirrhosis, fibrosis).<br><br>For high risk, every 6 months.<br><br>Normal person AFP every year. | No risk from blood test or ultrasound<br>Potential benign lesion detection requiring followup   | HCC can grow fairly rapidly. Doubling time 3-6 months. AFP test around 60% predictive. Tumour of >8mm can be visualised by ultrasound. Early detection often curable by surgery.  | Essentially no symptoms in early stages. Late stage: abdominal discomfort, nausea, ascites, jaundice  |
|        | Low-dose chest CT  | Lung (a whole family of cancers:<br>adenocarcinoma, SCC, large cell, neuroendocrine) | Early detection / black swans<br>Also detects aortic problems, aneurysms, congenital issues | Every 2-3 years  | Radiation (1-2mSv. For context, normal background 3mSv per year). So roughly 50-100% more than baseline.<br>Many false positives, harmless lesions    | Controversial. Not recommended at population level for non-smokers by any society or medical system. However, lung cancer in never-smokers is still one of most common cancers. Attia recommends every 1y, since preclinical detectable phase is often 1-2 years.<br>Still no guarantee (aggressive cancers can spread in <6 months). | No symptoms in early stages. Seek evaluation if >3 weeks of unexplained coughing, chest pain, shortness of breath, wheezing. Red flags: blood in cough, weight loss, bone pain  |
|        | Visual exam (self + clinician)   | Skin<br>(MM, BCC, SCC)   | Early detection, cure   | Every 6 months (self-check)<br>Annual (dermatologist)  | No risk other than false positive, biopsy or unnecessary removals   | Melanoma risk is non-zero even in low-risk populations. Higher with Fitzpatrick III or less skin. Unrelated to UV exposure. Typically starts as a mole which visibly changes over several months. Curable until vertical invasion. SCC/BCC more common, less deadly, usually in sun-exposed areas.                                    | Highly-pigmented lesions. Rapid change in appearance.<br><b>ABCDE</b> (asymmetry, irregular border or bleeding, uneven colour, diameter >6mm, evolving appearance).<br>Check: face, ears, scalp, neck, chest, abdomen, arms, between fingers, under arms, back, buttocks, legs, toes, soles of feet. Nail beds present as a dark streak/line. |
|        | Self-exam<br>Dentist checkup   | Oral   | Early detection   | Dental check every 6 months<br>Self-vigilance is highly effective  | No risk   | Screening varies by dentist, but should at least spot suspicious lesions, discolouration. Rarely look at throat.<br>Oropharyngeal cancer again associated with HPV - young people should vaccinate  | 2-3 weeks of: non-healing ulcers, red/white patch, persistent sore throat or hoarseness, ear pain (particularly one-sided), seek medical followup   |
| Men    | Self-exam  | Testicular   | Early detection, cure   | Monthly self-check   | No risk   | Rare, but early detection is simple and effective. Early stage is highly curable. Can progress very rapidly, so monthly screening is best. Very easy to follow up by ultrasound, which can distinguish benign/cancer  | Roll each testicle between fingers and thumb. Should be smooth and firm like a boiled egg. Warning signs are harder feeling, painless lump (inside or on surface), swelling on one side, or a lump that does not move. (Imagine a pebble in a boiled egg).  |
|        | PSA blood test   | Prostate (PC)  | Early detection   | Every 1-2 years from 40  | No risk from blood test   | Start earlier if family history. Yearly PSA is good to establish personal baseline and see a trend. Rapid rise (PSA velocity) is more worrying than slow rise. Avoid ejaculation/bike before test. If higher, re-test in 3 months.  |   |
| Women  | HPV + Pap test   | Cervical (CC)  | Prevention  | Every 3-5 years  | Discomfort, spotting<br>True complications very rare  | CC is very slow and linear growing. HPV to pre-cancer 5-10y, pre-cancer to cancer 5-10y. Thus 3-5y is suitable screening interval. CC largely driven by chronic HPV. Most people 40+ are infected at some point, 6-7% have long-term high risk infections. Younger people should vaccinate.   |   |
|        | Mammography  | Breast   | Early detection   | Annually (based on age, higher frequency >50yo)  | Low dose radiation (0.4 mSv)<br>Many false positives<br>Detection of slow-growing cancers which are not dangerous, but will require surgery/treatment | Yearly, or 2x per year if higher risk. Breast cancer highly variable - slow or aggressive, non-linear progression. Mammography not great at population level (reduces 1 death per 2,000 women screened)   | Self-checks no longer recommended. But self-vigilance and awareness is effective. Look for new skin dimpling (orange peel)/puckering, nipple inversion, redness, nipple discharge (particularly clear, blood or one-sided). Learn baseline and be sensitive to changes. Note: area is large, including arm pits, collar bone, sternum.        |
| Nobody | Brain CT or MRI  | Brain (GBM etc)  | In theory, early detection<br>Can detect meningioma, aneurysms etc                          | Not recommended  | Many false positives. No survival benefit proven  | Often finds benign meningiomas which will not kill you in a normal lifetime, but require follow-up.<br>GBM extremely aggressive (thankfully rare). Median diagnosis age is 64yo. Small tumours often cause symptoms anyway. No proven survival benefit of detection.  |   |
|        | CT<br>May be covered by abdominal ultrasound, but not failsafe                               | Pancreatic   | In theory, early detection  |  | Many false positives. No survival benefit proven  | Spreads very quickly. Often occurs and spreads between tests.   |   |
|        | Transvaginal ultrasound  | Ovarian  | In theory, early detection  |  | Many false positives<br>Ultrasound cannot identify tumour from cysts.   | No effective screening tool. Deep location. Spreads quickly into peritoneum, even at very early stage.<br>No proven survival benefit.<br>Interestingly, 5 years oral contraceptive use, pregnancy and breast feeding are highly protective (40-50% reduction)   |   |
|        | Transvaginal ultrasound  | Endometrial  |   |  | Huge numbers of false positives<br>Poor imaging   | Biopsy is best method.<br>Note: for HRT, progestin paired with oestrogen lowers risk  | Careful monitoring of bleeding is a more sensitive tool.<br>New, irregular, heavy, post-coital should be investigated.<br>Post-menopause, any bleeding should be investigated.  |