# Tables

**Table 1: Ongoing clinical trial investigating the effectiveness of combining immunotherapy to immunonutrition.**

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| **Title and ID number** | **Patients** | **Study design** | **Primary outcome/s** | **Secondary outcomes** |
| Immunonutrition for Improving the Efficacy of Immunotherapy in Patients With Metastatic Non-small Cell Lung Cancer (MURAL)  NCT05384873 | Metastatic NSCLC | Randomized interventional study  Intervention: Immunonutrition  Control: standard ONS | * PFS | * Duration response * Treatment side effects * Body composition * Fatigue * QoL * Activity levels * Levels of immunological markers |
| Efficacy and Safety of Concurrent PD-1 Inhibitor and Radiotherapy With Immunonutrition for Esophageal Squamous Cell Carcinoma  NCT06342167 | Esophageal Squamous Cell Carcinoma | Single-arm interventional study  Intervention: IO+ RT+ immunonutrition support | * PFS | * ORR * OS * AEs incidence |

NSCLC: Non-Small Cell Lung Cancer; PFS: Progression Free Survival; QoL: Quality of Life; ORR: Objective Response Rate; OS: Overall Survival; AEs: Adverse Event; IO: immunotherapy; RT: Radiotherapy.

**Table 2: Ongoing clinical trial investigating the association between gut microbiome composition and immunotherapy.**

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| **Title and ID number** | **Patients** | **Study design** | **Primary outcome/s** | **Secondary outcomes** |
| Effect of Gut Microbiota and Its Metabolites on the Efficacy of Immunotherapy in Metastatic Colorectal Cancer  NCT06714903 | Metastatic colorectal cancer | Observational, prospective study  Group 1: sintilimab plus fruquintinib  Group 2: fruquintinib alone  Variables collected: GM; metabolomic and proteomics signatures | * IO efficacy | - |
| The Gut Microbiome and Immunotherapy Response in Solid Cancers  NCT06050733 | Solid cancer patient | Observational, Cross-sectional  Group 1: patients with disease progression  Group 2: patients with stable or experience shrinkage in tumour size | * Characterization of fecal microbiome | * Cognitive function * Fatigue * Gastrointestinal health |
| The Intestinal Microbiome in Triple Negative Breast Cancer Treated with Immunotherapy (IMPACT)  NCT06318507 | Breast Neoplasms | Observational, prospective study  Variables collected: GM diversity | * pCR | - |
| ARGONAUT: Stool and Blood Sample Bank for Cancer Patients  NCT04638751 | * NSCLC * TNBC * Colorectal cancer * Pancreatic cancer * High risk for colorectal cancer | Observational, prospective study | * GM predictiveness of PFS * GM predictiveness of colorectal cancer | * Correlation between GM composition and immune markers * GM predictiveness of OS * Library building |
| Gut Microbiome and Treatment for Gynaecological Cancer Patients Receiving Immunotherapy  NCT04957511 | Advanced or recurrent gynaecological cancer | Observational, prospective study | * GM microbiome changes | - |
| Association Between Microbiome and the Efficacy and Safety of PD-1/PD-L1 Blockade in Resectable NSCLC  NCT06613308 | Resectable NSCLC | Observational, prospective study  Group 1: Neoadjuvant IO+ CTx  Group 2: Neoadjuvant CTx | * mPR * pCR | * DFS * OS * irAEs * Microbes in respiratory and gut tracts * Radiological response * Single-cell immune repertoire |
| Development and Analysis of a Stool Bank for Cancer Patients  NCT04291755 | Patients undergoing cancer IO | Observational, prospective study  Variables collected: Stool, blood, urine samples | * ICIs response |  |
| Microbiome Immunotherapy Neoadjuvant Assessment (MINA)  NCT06709651 | early-stage TNBC | Observational, prospective study | * Local breast cancer microbiome pre-vs post-therapy | * Local breast cancer microbiome and pCR * Local breast cancer microbiome and event-free survival * Local breast cancer microbiome and OS * Local breast cancer microbiome and TILs * GM pre- vs post-therapy |
| Microbiome Immunotherapy Toxicity and Response Evaluation  NCT04107168 | Advanced cancer | Observational, prospective study | * GM predictiveness of PFS | * GM predictiveness of OS * GM predictiveness of relapse * GM correlation with treatment efficacy * GM correlation with incidence and type of irAEs * GM correlation with patients features * Library building |
| Modulation of the Gut Microbiome With Pembrolizumab Following Chemotherapy in Resectable Pancreatic Cancer  NCT05462496 | Pancreatic adenocarcinoma | Single-arm interventional study  Intervention: antibiotics+pembrolizumab following CTx | * Overall immune response | * AEs incidence * R0 resection rate * Proportion of participant with histologic regression score 0, 1 or 2 * ORR * OS |
| A Study of Oncobax®-AK in Patients With Advanced Solid Tumors  NCT05865730 | NSCLC and RCC | Single-arm interventional study (phase 1/2)  Intervention: Live bacteria product: Akkeremansia municiphila | * ORR | * PFS |
| The Impact of Probiotic on Survival and Treatment Response in Metastatic Non-small Cell Lung Cancer Patients  NCT06428422 | Metastatic NSCLC | Randomized interventional study  Intervention: Bifidobacterium animalis subsp. Alctis B1-04  Control: placebo | * Clinical Response * PFS * OS | * GM modulation * Immunological findings |
| Metastatic Melanoma Patients on Immunotherapy With Nutritive Intervention Based on Mediterranean Diet (MINI-MD)  NCT06236360 | Metastatic melanoma | Randomized interventional study  Intervention: MedDiet  Control: no diet | * Levels of ingested flavones, anthocyanin; w-3 FA; Vitamin D; fiber | * Radiological response rate * Association between GM changes and IO response * QoL * Biochemical biomarker of melanoma (S100 and LDH) * GM changes and immune response and AEs |
| The Effect of Diet and Exercise on ImmuNotherapy and the Microbiome (EDEN)  NCT04866810 | Melanoma | Randomized interventional study  Intervention: High-fibre, plant-based diet+ exercise  Control: Standard Diet and exercise  Variables collected: GM signatures | * Feasibility | * OS * QoL * ORR |
| Prebiotic Food-enriched Diet (PreFED) to Enhance the Microbiome and Response to First-line Immunotherapy in Unresectable Melanoma  NCT06466434 | Unresectable melanoma | Single-arm interventional study  Intervention: Prebiotic Food-enriched diet | * Stool Faecalibacterium abbundances |  |
| High-Intensity Exercise and High-Fiber Diet for Immunotherapy Outcomes in Melanoma Patients: The DUO Trial  NCT06298734 | Advanced melanoma | Randomized interventional study  Arm 1: Exercise program  Arm 2: Diet program  Arm 3: Exercise+ diet program  Arm 4: no intervention | * GM diversity | * Systemic immune function * Cardiopulmonary fitness * Short Physical Performance Battery * Body composition * Anthropometric measures |
| FMT+ Immunotherapy+ Chemotherapy As First-line Treatment for Driver-gene Negative Advanced NSCLC  NCT06403111 | NSCLC | Single-arm interventional trial  Intervention: CTx + IO + FMT | * PFS | * ORR * AEs incidence * DOR * GM diversity * QoL |
| FMT to Convert Response to Immunotherapy  NCT05251389 | Advanced cutaneous end stage melanoma | Randomized interventional study  Intervention: FMT from a ICI non-responding donor  Control: FMT from a ICI responding donor | * Efficacy (SD, PR, CR | * Safety * PFS * GM changes and stability * Immune cells population changes in the TME |
| Fecal Microbiota Transplantation With Immune Checkpoint Inhibitors in Lung Cancer  NCT05502913 | Metastatic lung cancer | Randomized interventional study  Intervention: SoC [IO± CTx] + FMT  Control: SoC | * PFS | * OS * ORR * Rate of Disease Control * Microbiome analysis * Antibody and lymphocytes subpopulation * Safety and feasibility |
| Fecal Microbiota Preventing Toxicity in Renal Cancer Patients Treated With Immunotherapy Using Fecal Microbiota Transplantation (PERFORM)  NCT04163289 | RCC | Single-arm interventional study  Intervention: FMT | * Immune-related colitis occurrence | * irAEs incidence * Treatment discontinuation because of irAEs * ORR * GM changes * Immune response * QoL * PFS * OS * Tumor immune profile |
| Fecal Microbiota Transfer in Liver Cancer to Overcome Resistance to Atezolizumab/Bevacizumab (FLORA) (FLORA)  NCT05690048 | HCC | Randomized interventional trial  Intervention: FMT  Control: placebo FMT | * CD8 T-cell tumoral infiltration * AEs | * PFS * OD * Hepatic function |
| FMT in IT-refractory HCC - FAB-HCC Pilot Study  NCT05750030 | HCC | Single-arm interventional trial  Intervention: FMT+ Atezolizumab + Bevacizumab | * Safety (AEs incidence) | * Efficacy (CR, PR, SD, PD * Efficacy (ORR, DCR) * Efficacy (PFS, OS) * QoL * GM composition * Gut immune activity * Circulating immune cells * Stool metabolomics and lipidomics |
| Fecal Microbial Transplantation in Combination With Immunotherapy in Melanoma Patients (MIMic)  NCT03772899 | Melanoma | Single-arm interventional study  Intervention: FMT | * Safety | * ORR * GM composition * Immune blood biomarkers * metabolomics |

GM: Gut microbiome; pCR: pathological Complete Response; NSCLC: Non-Small Cell Lung Cancer; TNBC: Triple Negative Breast Cancer; PFS: Progression Free Survival; OS: Overall Survival; CTx: Chemotherapy; mPR: major Pathological Response; DFS: Disease Free Survival; IO: immunotherapy; TILs: Tumour Infiltrating Leukocytes; ORR: Overall Response Rate; RCC. Renal Cell Carcinoma; MedDiet: Mediterranean diet; w-3 FA: omega-3 Fatty Acid; QoL: Quality of Life; FMT: Fecal Microbiome Transplantation; DOR: Duration Of Response; SD: Stable Disease; PR: Partial Response; CR: Complete Response; TME: Tumor microenvironment; SoC: Standard of Care; HCC: Hepatocellular Carcinoma; PD: Progressive Disease.

**Table 3: Ongoing clinical trial investigating the association between alternative diets and immunotherapy.**

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| **Title** | **Patients** | **Study design** | **Primary outcome/s** | **Secondary outcomes** |
| FASTing-like Approach and Maintenance IMMunotherapy in ES-SCLC Patients Not Progressing on Chemo immunotherapy Induction (FASTIMMUNE)  NCT05703997 | ES-SCLC | Single-arm interventional study  Intervention: 5-day calorie restriction | * PFS | * OS * Compliance * AEs * Plasma amino acids * Plasma fatty acids * Serum growth factors * Peripheral blood immune cell populations |
| Low Dose TamOxifen and LifestylE Changes for bReast cANcer prevenTion (TOLERANT)  NCT06033092 | Women at increased risk for BC | Randomized interventional study  Arm 1: Low dose tamoxifen + Intermittent Caloric Restriction  Arm 2: Lifestyle intervention  Arm 3: Lifestyle Intervention + Intermittent Caloric Restriction  Arm 4: Low dose tamoxifen | * Post intervention levels of circulating binding globulin |  |
| Ketogenic Dietary Intervention to Improve Response to Immunotherapy in Patients with Metastatic Melanoma and Metastatic Kidney Cancer  NCT06391099 | Metastatic RCC and melanoma | Randomized interventional study:  Intervention: Ketogenic diet  Control: usual care | * Incidence of AEs * Feasibility |  |
| A Pilot and Feasibility Study of a Dietary Intervention with Low-protein Meals in Cancer Patients Receiving Immunotherapies  NCT05356182 | Cancer treated with immunotherapy | Randomized interventional trial  Intervention: Low-protein diet  Control: Control diet | * Feasibility | * Immune response * Safety and tolerability * Efficacy |

ES-SCLC: Extensive-stage small cell lung cancer; BC: Breast Cancer; RCC: renal cell carcinoma; AEs: Adverse Event.