

Table S1. Clinical characteristics of CD patients with multiplex autoimmune diseases.

| Gender | Age at diagnosis | Clinical presentation | Autoimmune diseases |
|--------|------------------|-----------------------|---|
| female | 24 | non-classical | Sjögren's disease, SLE, ITP, autoimmune thyroiditis |
| male | 13 | non-classical | Sjögren's disease, SLE |
| female | 62 | non-classical | Sjögren's disease, PBC, dermatitis herpetiformis |
| female | 28 | non-classical | autoimmune hepatitis, Sjögren's disease, SLE |
| male | 39 | non-classical | autoimmune hepatitis, Sjögren's disease, PBC |
| female | 26 | non-classical | alopecia areata, RA |
| female | 24 | non-classical | alopecia areata, autoimmune thyroiditis |
| female | 48 | classical | Raynaud syndrome, Sjögren's disease, RA, autoimmune thyroiditis |
| female | 41 | non-classical | Raynaud syndrome, Sjögren's disease, autoimmune thyroiditis |
| female | 45 | non-classical | Raynaud syndrome, Sjögren's disease, autoimmune thyroiditis |
| female | 34 | non-classical | Raynaud, Sjögren's disease |
| female | 31 | classical | Raynaud, PBC |
| female | 6 | non-classical | Raynaud, ulcerative colitis, PSC |
| male | 44 | non-classical | Raynaud, ulcerative colitis |
| female | 18 | classical | Raynaud, SSc |
| male | 54 | non-classical | Raynaud, MCTD, pulmonary fibrosis, polymyositis |
| female | 29 | classical | Raynaud, autoimmune thyroiditis |
| female | 69 | non-classical | Raynaud, autoimmune thyroiditis |
| female | 27 | classical | Raynaud, autoimmune thyroiditis |
| female | 5 | classical | Raynaud, autoimmune thyroiditis |
| female | 30 | non-classical | Raynaud, RA |
| male | 23 | non-classical | Raynaud, psoriasis, antiphospholipid syndrome |
| female | 34 | non-classical | Raynaud, psoriasis, autoimmune thyroiditis, antiphospholipid syndrome |
| female | 51 | classical | IgA nephropathy, autoimmune thyroiditis |
| female | 45 | classical | IgA nephropathy, autoimmune thyroiditis |
| female | 32 | classical | IDDM, Raynaud |
| female | 16 | non-classical | IDDM, autoimmune thyroiditis |
| female | 32 | non-classical | IDDM, autoimmune thyroiditis |
| male | 9 | non-classical | IDDM, autoimmune thyroiditis |
| male | 3 | non-classical | IDDM, autoimmune thyroiditis |

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|--------|----|---------------|----------------------------------|
| female | 6 | non-classical | IDDM, autoimmune thyroiditis |
| female | 11 | non-classical | IDDM, autoimmune thyroiditis |
| male | 17 | non-classical | IDDM, autoimmune thyroiditis |
| female | 6 | non-classical | IDDM, autoimmune thyroiditis |
| female | 5 | non-classical | IDDM, autoimmune thyroiditis |
| female | 17 | non-classical | IDDM, autoimmune thyroiditis |
| male | 11 | non-classical | IDDM, dermatomyositis |
| female | 50 | non-classical | psoriasis, lichen ruber |
| female | 15 | non-classic | vitiligo, autoimmune thyroiditis |
| female | 1 | classical | vitiligo, autoimmune thyroiditis |
| female | 3 | classical | vitiligo, autoimmune thyroiditis |
| female | 36 | classical | Raynaud, psoriasis |
| female | 51 | classical | sarcoidosis, lichen oris |

SLE: systemic lupus erythematosus, ITP: idiopathic thrombocytopenic purpura, PBC: primary biliary cholangitis, PSC: primary sclerotizing cholangitis, RA: rheumatoid arthritis, IDDM: insulin dependent diabetes mellitus, IgA: Immunoglobulin A.

Table S2. Clinical characteristics of patients with tumours.

| Gender | Age at CD diagnosis | Age at tumour diagnosis | Year of the birth | Year of CD diagnosis | Clinical feature | Type of malignancy |
|--------|---------------------|-------------------------|-------------------|----------------------|------------------|----------------------------|
| female | 29 | 36 | 1980 | 2009 | classical | mamma carcinoma |
| male | 46 | 55 | 1959 | 2005 | classical | lung carcinoma |
| female | 5 | 62 | 1954 | 1959 | classical | endometrial carcinoma |
| male | 42 | 48 | 1952 | 1994 | classical | colorectal carcinoma |
| female | 59 | 75 | 1941 | 2000 | classical | pancreas carcinoma |
| male | 18 | 13 | 1995 | 2013 | classical | testicular teratocarcinoma |
| male | 23 | 16 | 1993 | 2016 | non-classical | embryonal testis carcinoma |
| male | 28 | 61 | 1953 | 1981 | classical | colorectal carcinoma |
| female | 55 | 55 | 1954 | 2009 | classical | colorectal carcinoma |
| female | 69 | 73 | 1945 | 2014 | non-classical | mucinous ovarian tumour |
| female | 36 | 38 | 1972 | 2008 | classical | malignant melanoma |

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|--------|----|----|------|------|---------------|---|
| male | 3 | 6 | 1995 | 1998 | non-classical | NHL |
| female | 23 | 15 | 1989 | 2012 | non-classical | osteogenic sarcoma |
| male | 5 | 5 | 2009 | 2014 | non-classical | atypical teratoid rhabdoid brain tumour |
| female | 47 | 35 | 1969 | 2016 | classical | colorectal carcinoma |
| male | 1 | 50 | 1968 | 1969 | classical | soft tissue sarcoma |
| female | 48 | 51 | 1959 | 2007 | classical | mamma carcinoma |
| female | 57 | 81 | 1932 | 1989 | classical | colorectal carcinoma |
| female | 41 | 45 | 1967 | 2008 | classical | renal cell carcinoma |
| female | 10 | 15 | 1997 | 2007 | non-classical | thyroid papillary carcinoma |
| female | 42 | 24 | 1969 | 2011 | classical | malignant melanoma |
| female | 64 | 64 | 1952 | 2016 | non-classical | meningioma |
| female | 52 | 71 | 1934 | 1986 | classical | NHL |

NHL: Non-Hodgkin Lymphoma