all immunotherapy drugs | **Pembrolizumab** | **Nivolumab**

immuno post−matching (I−p)
chemo post−matching (C−p)
immun before−matching (I−b)
chemo before−matching (C−b)

Pembrolizumab post−matching (P−p)
chemo post−matching (C−p)
Pembrolizumab before−matching (P−b)
chemo before−matching (C−b)

Nivolumab post−matching (N−p)
chemo post−matching (C−p)
Nivolumab before−matching (N−b)
chemo before−matching (C−b)

all autoimmune diseases — P<0.0001 (post−matching), P<0.0001 (before−matching) | P=0.0075 (post−matching), P<0.0001 (before−matching) | P<0.0001 (post−matching), P<0.0001 (before−matching)

Months after therapy initiation

Acute rheumatic heart disease — P = 1 | P = 1 | P = 1

Alopecia — P = 0.8809 | P = 1 | P = 0.9191

Ankylosing spondylitis — P = 1 | P = 1 | P = 1

Arthropathy — P = 1 | P = 1 | P = 1

Autoimmune disease NEC — P = 1 | P = 1 | P = 1

Autoimmune hemolytic anemias — P = 1 | P = 1 | P = 1

Behcet's syndrome — P = 1 | P = 1 | P = 1

Biliary cirrhosis — P = 1 | P = 1 | P = 1

Bullous dermatoses — P = 1 | P = 1 | P = 1

Celiac disease — P = 1 | P = 1 | P = 1

Chronic hepatitis — P = 1 | P = 1 | P = 1

Dermatomyositis — P = 1 | P = 1 | P = 1

diabetes mellitus — P = 0.9185 | P = 1 | P = 0.6904

Diffuse diseases of connective tissue — P = 1 | P = 1 | P = 1

Diseases of hair and hair follicles — P = 1 | P = 1 | P = 0.9191

Encephalitis — P = 1 | P = 1 | P = 1

Endocarditis — P = 1 | P = 1 | P = 1

Giant cell arteritis — P = 1 | P = 1 | P = 1

Glomerulonephritis — P = 1 | P = 1 | P = 1

Glucocorticoid deficiency — P = 1 | P = 1 | P = 1

Graves' disease — P = 1 | P = 1 | P = 1

Hypothyroidism NOS — P < 0.0001 | P = 0.0343 | P < 0.0001

IBD — P = 1 | P = 1 | P = 1

Inflammatory and toxic neuropathy — P = 0.9185 | P = 1 | P = 0.9191

Multiple sclerosis — P = 1 | P = 1 | P = 1

Myalgia and myositis NOS — P = 0.0837 | P = 1 | P = 0.2383

Myoneural disorders — P = 1 | P = 1 | P = 1

Nephritis — P = 1 | P = 1 | P = 1

Other demyelinating diseases of central nervous system — P = 1 | P = 1 | P = 1

Other diseases of lung — P = 0.9185 | P = 1 | P = 1

Other disorders of the immune mechanism — P = 1 | P = 1 | P = 1

Other endocrine disorders — P = 1 | P = 1 | P = 1

Other immunological findings — P = 1 | P = 1 | P = 1

Other specified diffuse diseases of connective tissue — P = 1 | P = 1 | P = 1

Pemphigus and pemphigoid — P = 1 | P = 1 | P = 1

Peripheral autonomic neuropathy — P = 1 | P = 1 | P = 1

Polyarteritis nodosa and allied conditions — P = 1 | P = 1 | P = 1

Polymyalgia Rheumatica — P = 1 | P = 1 | P = 1

Polymyositis — P = 1 | P = 1 | P = 1

Primary thrombocytopenia — P = 1 | P = 1 | P = 1

Psoriasis vulgaris — P = 1 | P = 1 | P = 1

Psoriatic arthropathy — P = 1 | P = 1 | P = 1

RA — P = 1 | P = 1 | P = 1

Raynaud's syndrome — P = 0.9185 | P = 1 | P = 1

Reiter's disease — P = 1 | P = 1 | P = 1

Rheumatic fever / chorea — P = 1 | P = 1 | P = 1

Sarcoidosis — P = 1 | P = 1 | P = 1

Sicca syndrome — P = 1 | P = 1 | P = 1

Systemic lupus erythematosus — P = 1 | P = 1 | P = 1

Systemic sclerosis — P = 1 | P = 1 | P = 1

Thrombotic microangiopathy — P = 1 | P = 1 | P = 1

Thyroiditis — P = 0.9185 | P = 1 | P = 1

Thyrotoxicosis with or without goiter — P = 0.0209 | P = 1 | P = 0.0403

Toxic erythema — P = 1 | P = 1 | P = 1

Vitiligo — P = 0.8809 | P = 0.0309 | P = 1

Wegener's granulomatosis — P = 1 | P = 1 | P = 1

num. at risk

post−matching

C−p	431.0	764.0	397.5	242.2	152.2	98.5
I−p	1431	412	158	27	2	NA

before−matching

C−b	14224	13652	7506	4580	2960	1947
I−b	1810	533	210	42	4	1

post−matching

C−p	297.0	160.2	86.9	58.5	37.7	26.9
P−p	297	45	23	3	NA	NA

before−matching

C−b	14224	13652	7506	4580	2960	1947
P−b	373	60	28	5	NA	NA

post−matching

C−p	107.0	590.0	299.1	178.9	110.9	72.2
N−p	1107	364	134	22	NA	NA

before−matching

C−b	14224	13652	7506	4580	2960	1947
N−b	1393	466	181	34	NA	NA