**Table S1: Vaccination History of Participants**

|  |  |
| --- | --- |
|  | **N** |
| **mRNA Vaccination preceeding PACVS Onset** |  |
| Moderna (SpikeVax) | 32 |
| BioNTech (Comirnatry) | 159 |
| **Vaccination Cycles before PACVS Onset** |  |
| 1 cycle | 47 |
| 2 cycles | 96 |
| 3 cycles | 48 |
| **Vaccination Regimen before PACVS Onset** |  |
| 1x BioNTech2x BioNTech3x BioNTech | 417227 |
| 1x Moderna2x Moderna3x Moderna  | 6116 |
| Moderna/ BioNTech2x BioNTech/ Moderna2x Moderna/ BionNTech | 182 |
| Astra-Zeneca/ BioNTechAstra-Zeneca/ ModernaAstra-Zeneca/ 2x BioNTech | 715 |
| Janssen/ BioNTechJanssen/ Moderna | 31 |

**Table S2: Meta Data and In-/Exclusion Criteria of Controls and PACVS Subjects**

|  |  |
| --- | --- |
| **Controls**Inclusion:Exclusion: | N = 89 , Gender: 71 female, 18 male (p<0.001)Age (years, range/mean/median): 21 - 64, 39/49 (p<0.0001)Initial dual vaccination with Spikevax (Moderna), spaced six weeksMonitoring period: six months after second vaccinationDonation of serum sample 48 h before first and 6 months after second vaccinationDe novo disease symptoms during monitoring period: * Immunological/ rheumatological disorders (myalgia, RBV-reactivation, inflammation, arthritis)
* Cardiovascular disorder (pressure crisis, heart insufficiency, arrhythmia, sinus tachycardia, ischemia)
* Neurologic disorder (cognitive impairment, peripheral nerve dysfunction, muscular fibrillation or paresis)
* Other disease or health condition entailing occupational impairment

Increased laboratory markers in post-vaccination serum:* IL-6 > 7 pg/ml, CRP > 0.5 mg/dl, pBNP > 125 pg/ml, TpT > 11 ng/ml, IgG < 700, >1600 mg/dL
* SARS-CoV-2 nucleocapsid antibodies indicative of passed SARS-CoV-2 infection
 |
| **Participants.**Inclusion:Exclusion:  | N = 191, Gender: 159 females, 32 males (p<0.001)Age (years, range, mean/median): 18 - 66, 40/39 years (p<0.0001)Development of symptoms or disease after SARS-CoV-2 vaccination with mRNA-vaccine (Moderna or Pfizer/BioNTech)Established or suspected diagnosis of syndrome or ≥3 symptoms thereof1Start of symptoms ≥ 1 week after first and/or ≤ 4 weeks after last vaccinationPersistent symptoms for ≥ 5 monthsCompletion of on-line query Donation of serum sample at ≥ 5 months after onset of symptomsDiseases/ syndromes (only included if occurring/diagnosed1 after SARS-CoV-2 vaccination):* Myalgic Enzephalomyelitis/Chronic Fatigue Syndrome (ME/CFS)
* Post-Covid-19/long Covid-19 syndrome in the absence of SARS-CoV-2-infection
* Post vaccination syndrome
* Postural Tachycardia Syndrome (POTS)
* Mastcell activation syndrome (MCAS)
* Fibromyalgia/chronic pain syndrome
* Peri-/Myocarditis
* Thrombosis
* Small fiber neuropathy (SFN)
* Bell’s palsy
* Guillain-Barré syndrome (GBS)
* Vaccine-induced hyperinflammation
* Other adverse vaccination reactions including herpes zoster

Included symptoms (≥3):* Immunological/ rheumatological disorders (e.g. myalgia, joint pain, swollen/painful lymph nodes)
* Cardiovascular disorder (e.g. orthostatic intolerance, arrhythmia, sinus tachycardia, palpitations)
* Neurologic disorder (e.g. cognitive impairment, peripheral nerve dysfunction, sensomotor paresis)
* Other consensus symptoms of ME/CSF [7]

Potentially confounding chronic medication pre- and post-vaccination* anti-psychotic, anti-depressive
* immunosuppressive, anti-proliferative, anti-inflammatory
* anti-biotic
* immunomodulative treatment after vaccination

Potentially confounding health condition existing before vaccination* immunological disease (e.g. Post-COVID, Long-COVID, rheumatic disease
* musculoskeletal disease (e.g. ME/CFS, Fibromyalgia, Complex regional pain syndrome)
* neurological disease (e.g. Multiple Sclerosis, Neuromyelitis Optica spectrum disorders, GBS, Chronic inflammatory demyelinating polyneuropathy (CIPD), Polyneuropathy other origin than CIPD)
* Psychiatric disorder (e.g. Depression, Anxiety disorder, Post-traumatic stress disorder, Obsessive compulsive disorder)
* Malignancies, transplantations

Symptoms following other vaccination (incl. non-mRNA SARS-CoV-2 vaccination) |

1By a physician in hospital or general practice



**Figure S1. Co-variance of Receptor Antibodies in Serum of healthy Volunteers (n=89):** Age, gender and serum values determined 48 h before first (A) and 6 months after second (B) SARS-CoV-2 vaccination (Spikevax, Moderna). Numerical values: Spearmans’s R, values ≥ 0.7 considered significant (p < 0.0001).



**Figure S2. ROC curves of Receptor Antibodies discriminating PACVS Subjects from post-Vaccination Controls**

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**Figure S3. Flow charts of inclusion of study participants (left) and controls (right).** In- /exclusion criteria are listed in Suppl. Tab. 1. Serological surveillance of healthy hospital employees used as source for controls as described in [37]