

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 5006

**Publication Number:** P2635

**Abstract Group:** 4.3. Pulmonary Circulation and Pulmonary Vascular Disease

**Keyword 1:** Pulmonary hypertension **Keyword 2:** Thoracic oncology **Keyword 3:** Imaging

**Title:** Pulmonary veno-occlusive disease (PVOD) induced by chemotherapy: Experience from the French PH network and literature review

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**Body:** Introduction: Pulmonary veno-occlusive disease (PVOD) is classified as a distinct subgroup of PAH regarding to the current classification of PH. Different hypothesis are discussed to favor the development of PVOD. PVOD has been associated to various chemotherapeutical regimens, to radiotherapy and after bone marrow transplantation (BMT). Methods: Search in the French Registry for terms 'PVOD' and 'chemotherapy', 'PVOD' and 'radiotherapy' and 'PVOD' and 'bone marrow transplantation' as well as literature review in medline. Articles were reviewed regarding to clinical, hemodynamical, radiological and histological characteristics. Results: We identified three cases of suspicion of developed PVOD after started chemotherapy in the setting of anal cancer (n=2) and acute myeloblastic leukemia (n=1). In the literature, we identified 28 cases of developed PVOD in the setting of malignancy after started chemotherapy. Developed PVOD was reported after commencement of chemo- and/or radiotherapy in the context of different forms of malignancy including leukemia (n=10), lymphoma (n=8), cerebral cancer (n=4), different etiologies of lung cancer (n=3), cervical carcinoma (n=3). Nearly two third of all patients underwent

histological examination, either by lung biopsy or autopsy. Chemotherapeutic agents which were often identified in this setting were cyclophosphamide, vincristine, cisplatin and metotrexate. Discussion: We identified chemotherapeutical agents in the literature which are susceptible in the development of PVOD. Alkylating agents are often reported. Further studies are mandatory to determinate if these agents play a key role in the development of PVOD.