Introduzione:
Il modello *hub-spoke* e *patient journey* e l'ottimizzazione del percorso diagnostico

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BPDCN Epidemiology

- BPDCN is a rare, clinically aggressive, historically difficult-to-diagnose hematologic malignancy with a poor prognosis
- Exact incidence of BPDCN is difficult to estimate due to lack of clear defining criteria prior to the 2008 WHO classification
- BPDCN may represent only *0.5% of all hematologic cancers* (an estimated 1700 cases annually in the US and Europe combined)
- BPDCN has clear gender predisposition with males disproportionately affected (M/F ratio of 2.5:1)
- Epidemiologic databases *probably underestimate* the incidence of BPDCN, given that a proportion of patients present without skin lesions

Diagnostic Challenges of BPDCN

- Variability of presentation of BPDCN
  - Cutaneous
    - Most patients present with skin lesions; the actual lesions can vary: nodular, diffuse bruise-like macules
  - Leukemia-like symptoms
    - A significant minority (?) of patients present without skin lesions, involving peripheral blood, bone marrow, lymph nodes, viscera
- Often mistaken for other, more familiar hematologic malignancies (AML, leukemia cutis, NHL, ALL, CMML, MDS, cutaneous lymphoma), leading to frequent misdiagnosis or underdiagnosis of BPDCN[2]
- Mean time between the onset of lesions and the pathologic diagnosis of BPDCN is 6.2 mos based on a retrospective analysis

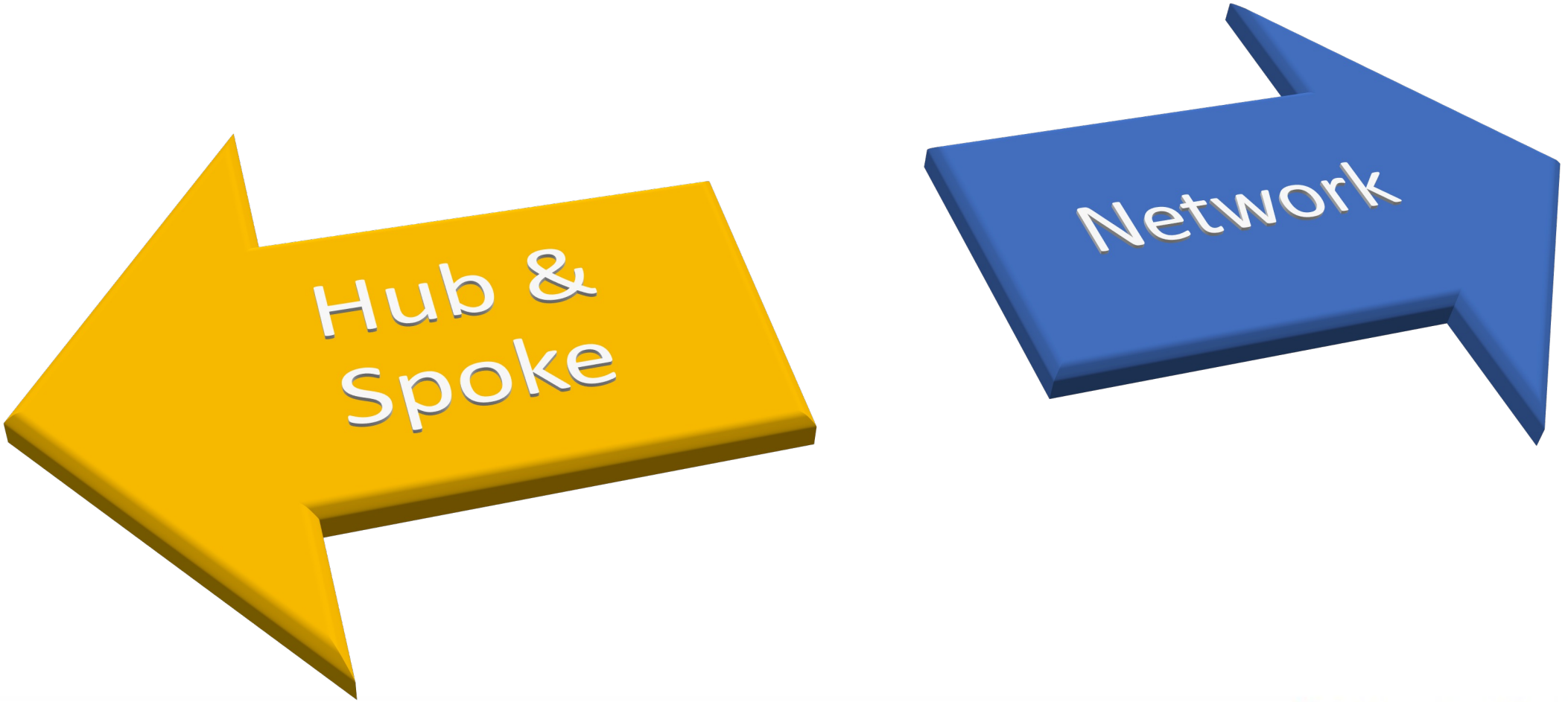
Key Biomarkers in the Diagnosis of BPDCN

- Early, accurate diagnosis is essential; any delays in the time before BPDCN is recognized can mean that disease progression may have already occurred
- Diagnosis of BPDCN requires a biopsy of plasmacytoid dendritic blast cells and immunophenotypic criteria established by either IHC or flow cytometry
- BPDCN is typically characterized by neoplastic cells that are positive for CD4, CD56, and CD123
- CD123 (or IL-3Rα) is highly expressed in BPDCN cells (~ 95%), with less expression on normal cells[1] and therefore a potential target for therapy
- Some of these key distinguishing markers may not be widely used
  - CD123 not typically included in hematologic diagnostic panels, contributing to misdiagnosis

Therapeutic Options in BPDCN

- Poor prognosis associated with BPDCN with a median OS from diagnosis of approximately 1 yr
- Historically, no accepted standard of care or approved therapies for patients with BPDCN
  - Treatment was standard chemotherapy based on ALL or AML regimens, but relapse is high, 50% to 90%, with low OS rates and lack of durable response
  - HSCT for eligible patients offers best chance of remission but relapse after CT is approximately 30% and most patients are unfit
- Current induction CT regimens for BPDCN are limited by lack of durable response, low OS rates and significant early mortality
- Following FDA approval for use in BPDCN, tagraxofusp should be considered in all eligible patients with BPDCN

Which model for the most effective management of BPDCN?



Shared Diagnostic and Therapeutic Care Pathways