COULD THE HEMATOLOGIC CANCER YOU JUST DIAGNOSED...

ACTUALLY BE BPDCN?

What the CD123 diagnostic marker can tell you*

HAVE YOU SEEN A CASE OF BPDCN?

Blastic plasmacytoid dendritic cell neoplasm (BPDCN):

- Is an **aggressive** and **deadly** hematologic cancer[1,2]
- May be **misidentified** because of its **similarity** to other **hematologic malignancies**[1,3-5]
- Primarily involves **skin**, **bone marrow**, and **peripheral blood**, with variable dermatologic and hematologic presentations[1,4,6,7]
- Is diagnosed through immunophenotype analysis, with confirming markers including **CD123**, **CD4**, and **CD56**[1,8*]

BPDCN MAY BE MISTAKEN FOR[1,3-5]

- AML
- ALL
- Leukemia cutis
- MDS
- Myeloid sarcoma
- CMML
- NK/T-cell lymphoma
- CTCL

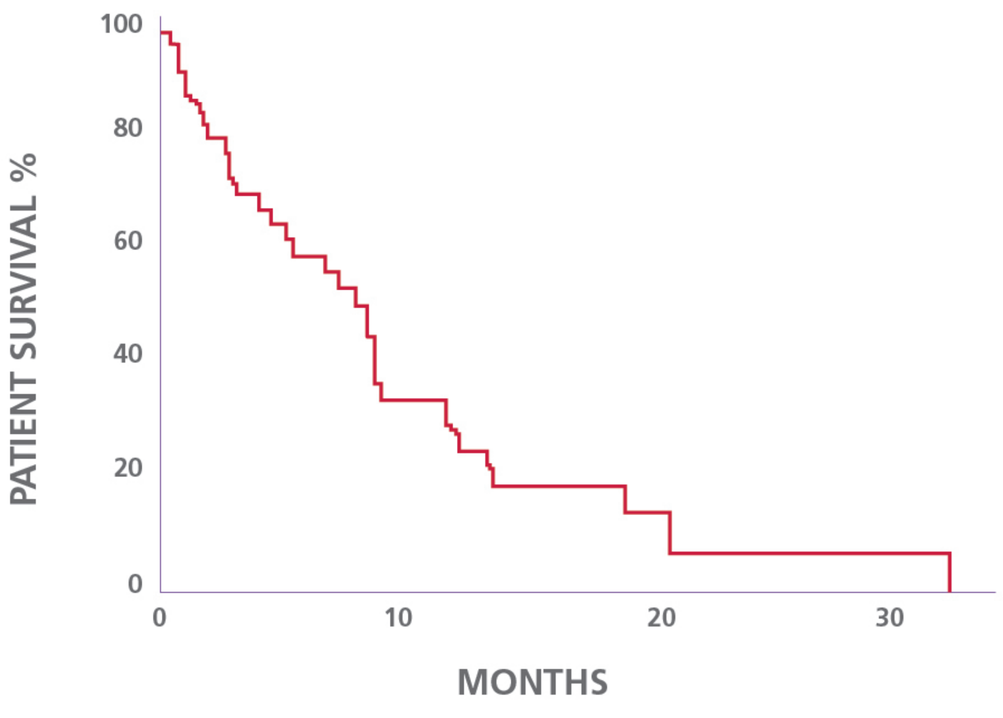
BPDCN CAN AFFECT A RANGE OF PATIENT DEMOGRAPHICS[1]

~75% are men[9]

Typically **60 to 70 years of age**, but all ages can be affected[1]

Affects **all races** and **geographical locations**[1]

HISTORICAL OVERALL SURVIVAL[9]



- In a retrospective analysis, the mean time between the onset of lesions and the final diagnosis of BPDCN was 6.2 months[10]
- Historically, median overall survival for BPDCN is approximately 8 to 14 months after diagnosis[1,2]
- BPDCN may rapidly progress to an aggressive leukemia[4,9]

Early and accurate diagnosis may be critical in improving patient outcomes[1]

AML = acute myeloid leukemia; NK = natural killer; ALL = acute lymphoblastic leukemia; MDS = myelodysplastic syndrome; CMML = chronic myelomonocytic leukemia; CTCL = cutaneous T-cell lymphoma.

*BPDCN diagnosis can include other markers, such as CD4, CD56, TCL1, TCF4, and CD303 (BDCA2).[1,11]

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YOUR AML PATIENT... MAY NOT HAVE AML

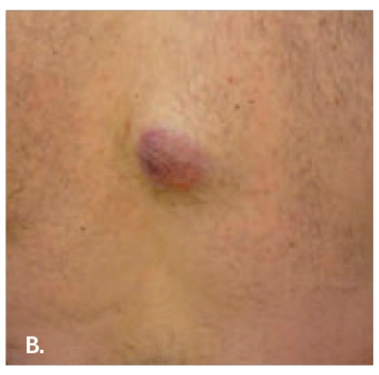
BPDCN PRESENTS AS LEUKEMIC DISEASE IN ~60% TO 90% OF PATIENTS[4,12]

Patients may present with leukemic signs/symptoms, such as anemia or other cytopenias, due to bone marrow involvement, swollen lymph nodes, or enlarged spleen[1]

~85% TO 90% OF PATIENTS WITH BPDCN PRESENT WITH SKIN LESIONS[3,7,10]

Deep purple nodular lesions[4,5,10,13]

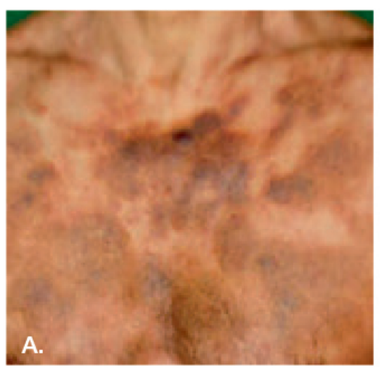
- Most common cutaneous manifestation in BPDCN patients
- Vary in appearance and distribution, localized to various body areas, particularly the trunk, limbs, and head

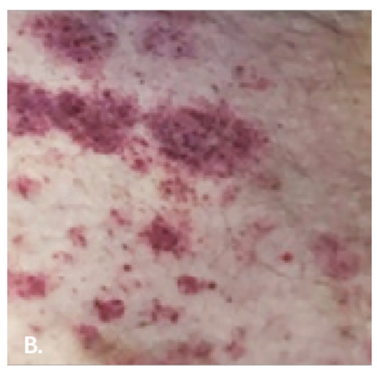


A. and B. Julia F, et al., Blastic plasmacytoid dendritic cell neoplasm: clinical features in 90 patients, *British Journal of Dermatology*. 2013;169: 579-586, published by John Wiley and Sons. © 2013 The Authors BJD © 2013 British Association of Dermatologists

Diffuse bruise-like or hyperpigmented red-brown macules[4,6,10]

- May be small and/or diffuse, 1 or several patches confined to various body areas, often nonpruritic
- Some patients present with disseminated and mixed lesions





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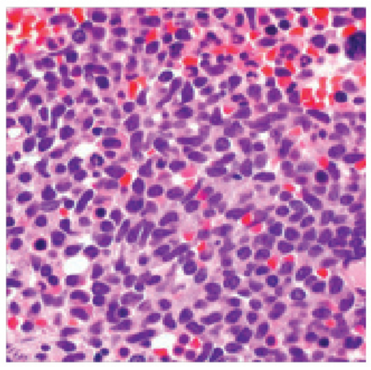
BIOPSIES ARE CRITICAL IN IDENTIFYING BPDCN[14]

Bone marrow



Core biopsy showing diffuse infiltrate by BPDCN (H&E stain, ×600)[4]

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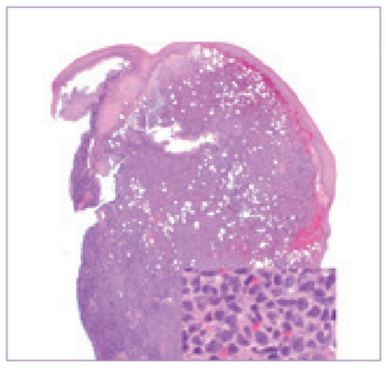
Skin



Punch biopsy of a skin lesion showing BPDCN (H&E stain, x40)

Inset: medium-sized malignant cells spare the epidermis (H&E stain, x1000)[4]

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CD123, CD4, AND CD56 COMPRISE A SIGNATURE MARKER TRIAD THAT IS KEY IN IDENTIFYING BPDCN[1,8]*

The CD123 marker:

- Is highly expressed on BPDCN cells (~95%) and negligibly expressed on healthy cells[3,9,15]
- Can be identified through skin biopsy or bone marrow biopsy of malignant cells[14]
- Can be both a diagnostic marker and a therapeutic target in BPDCN[2,3,14]
- Expression of MPO excludes BPDCN[7]

AML = acute myeloid leukemia; MPO = myeloperoxidase.

*BPDCN diagnosis can include other markers, such as TCL1, TCF4, and CD303 (BDCA2).[1,11]

Include BPDCN in your differential diagnosis for AML and other hematologic malignancies[1,14]

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