CLUSTERS OF DIFFERENTIATION - CD MARKERS

MOST USED CD MARKERS IN DIAGNOSTIC IMMUNOLOGY

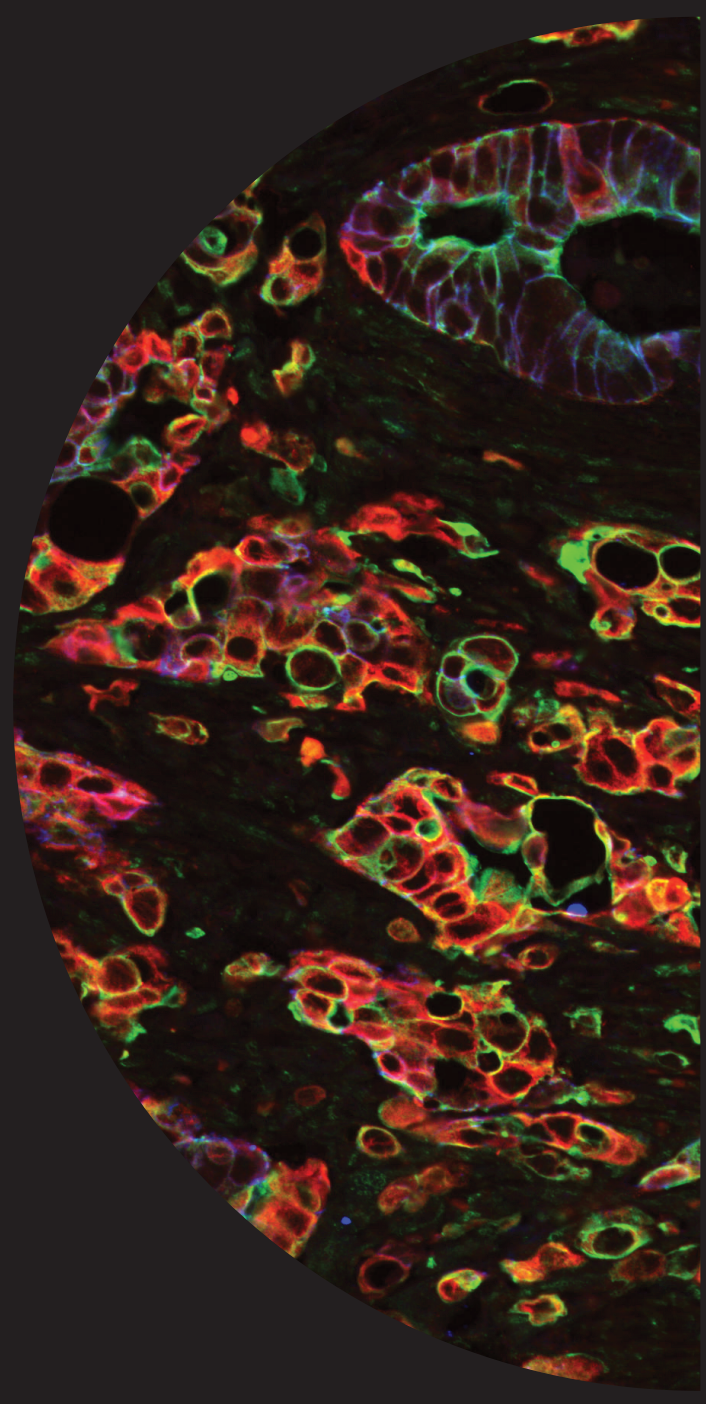
- 45 — LEUKOCYTES (ALL)
- 34, 117 — STEM CELLS
- 45, 61 — THROMBOCYTE
- 3, 45 — T- LYMPHOCYTE
- 4, 25 — T- REGULATORY CELL
- 3, 8, 45 — CYTOTOXIC T- CELL
- 3, 4, 45 — T- HELPER CELL
- 16, 30, 31, 38, 56 — NATURAL KILLER CELL
- 11b, 15, 24, 45, 114, 182 — GRANULOCYTES
- 19, 20, 22, 24, 38, 45 — B- LYMPHOCYTE
- 4, 14, 11a, 11b, 16, 45, 91, 114 — MONOCYTES

Each cell type has a specific set of CD markers and can be determined by them.

For example, all leukocytes carry CD45.

Leukocytes also positive for CD3 and CD8 are called cytotoxic T cells. Leukocytes also positive for CD3 and CD4 are called T helper cells.

Cluster of differentiation (CD) are surface molecules expressed on cells of the immune system such as lymphocytes (T-cells, B-cells, and NK-cells), neutrophils, and monocytes/ macrophages.



371 CD CLUSTERS DESCRIBED IN HUMANS

(HLDA Workshop)

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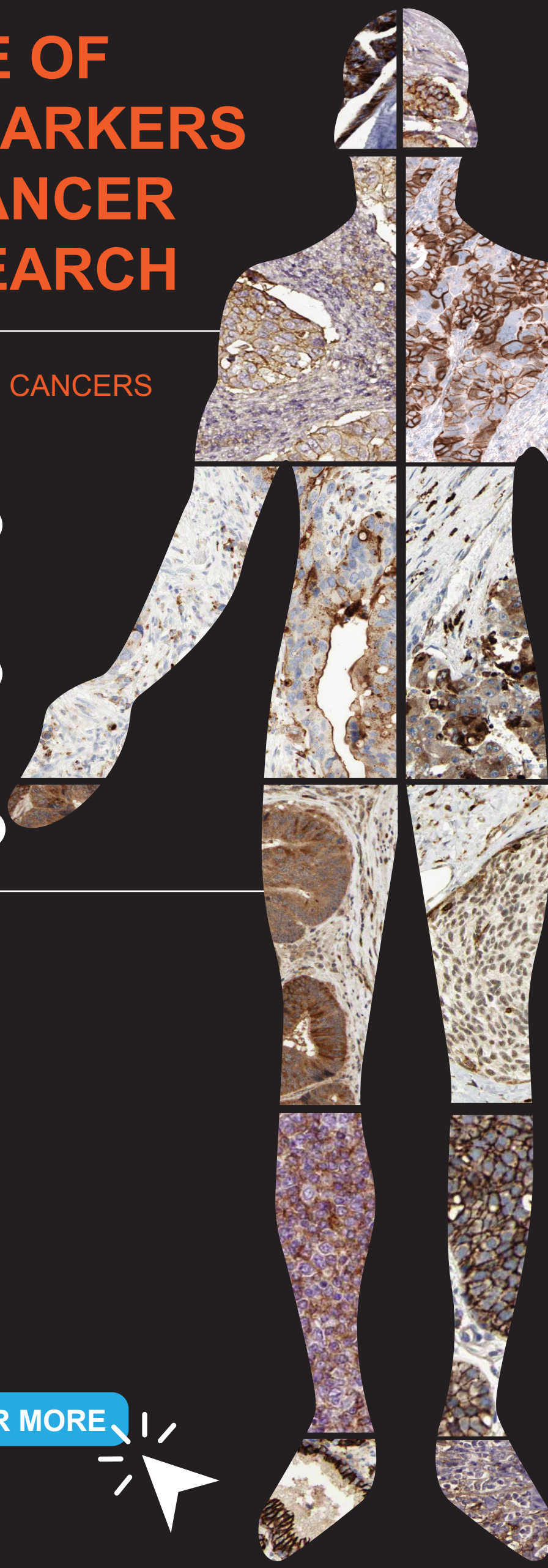
CD MARKERS ENABLE RESEARCHERS TO IDENTIFY AND TRACK SPECIFIC CELL POPULATIONS INFILTRATING WITHIN TUMORS.

IN CANCER RESEARCH, CD MARKERS ARE USED TO IDENTIFY AND ISOLATE TUMOR CELLS FROM THE SURROUNDING NORMAL TISSUE AND TO DISTINGUISH BETWEEN DIFFERENT SUBTYPES OF CANCER CELLS.

ROLE OF CD MARKERS IN CANCER RESEARCH



CANCER STEM CELL MARKERS IN VARIOUS HUMAN CANCERS

CD47 - LUNG CANCER
Anti-CD47/ ALCAM (HPA044659)

COLORECTAL CANCER
Anti-CD66/CEACAM1 (HPA011041)

CD133 - BRAIN CANCER
Anti-PROM1/CD133 (AMAb91494)

CD44 - BREAST CANCER
Anti-CD44 (HPA005785)

CD271 - MELANOMA
Anti-NGFR/CD271 (HPA004765)

CD56 - OVARIAN CANCER
Anti-NCAM1/CD56 (AMAb91807)

CD54 - STOMACH CANCER
Anti-ICAM1/CD54 (HPA002126)

CD117- RENAL CARCINOMA
Anti-KIT/CD117 (AMAb90904)

CD72 - MALIGNANT LYMPHOMA
Anti-CD72 (HPA044658)

DIAGNOSTIC VALUE AT DISEASE ONSET

THE EVALUATION OF THE ABNORMAL EXPRESSION OF CD MARKERS IN SOLID AND HEMOPOIETIC TUMORS CAN LED TO THE DETECTION OF DISEASES IN EARLY STAGES.

PROGNOSTIC VALUE FOR DISEASE PROGRESSION

MONITORING OF TUMORS PROGRESSION THROUGH CD MARKERS EXPRESSED ON CIRCULATING TUMOR CELLS COULD BE A NEW DIAGNOSTIC AND PROGNOSTIC FACTOR

DISCOVER MORE

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