

# Clinical Description of Patients with Cytoplasmic Discrete Speckles on Indirect Immunofluorescence in HEp-2 Cells in a University Hospital

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**Background:** Cytoplasmic Discrete Speckled (CDS) pattern is an unusual finding on Indirect Immunofluorescence (IIF). It's clinical value is unknown. This pattern comprises several antigens distributed in the **endosomes** (Early endosome antigen 1, cytoplasmic linker protein-170 [CLIP-170], and lysobiphosphatidic acid), **lysosomes** (H-LAMP antigens) and **GW bodies** (Antigen GW182, decapping enzymes, exonucleases).

**Purpose:** To describe clinical characteristics and associated antibodies of patients with CDS pattern on IIF.

### Methods:

Retrospective descriptive study. We included all patients with CDS pattern on IIF in HEp-2 cells with a titer equal to or greater than 1/80, using a database of all IIF performed in a referral laboratory of a university hospital (CEMIC) between 2007 and 2015.

We analyzed demographical and clinical information available on their clinical records, including sex, age, past medical history (**Table 1**) and additional relevant laboratory results (**Table 2**)

Table 1 – Demographics and Clinical description

N°	Age	Sex	IIF citop. Titer	IIF Nuclear Titer	Past Medical History
1	81	Fem	1/1280	Negative	Primary Hyperparathyroidism
2	70	Fem	1/1280	1/1280	Scleroderma, Cor Pulmonale, gout, hypothyroidism*
3	69	Fem	1/1280	Negative	Hashimoto Thyroiditis, 3 miscarriages
4	62	Fem	1/1280	Negative	None
5	56	Fem	1/1280	Negative	None
6	52	Fem	1/1280	Negative	None
7	70	Fem	1/640	Negative	Hypothyroidism *, Brain tumor
8	66	Fem	1/640	1/640	Hashimoto thyroiditis, Polymyalgia Rheumatica
9	66	Fem	1/640	Negative	None
10	53	Fem	1/640	1/1280	Undifferentiated connective tissue disease
11	50	Fem	1/640	Negative	Discoid Lupus, Psoriasis, COPD
12	60	Fem	1/320	Negative	Dermatomyositis
13	59	Fem	1/320	Negative	Hashimoto Thyroiditis, 3 miscarriages
14	52	Fem	1/320	Negative	Hashimoto Thyroiditis, 3 miscarriages
15	51	Fem	1/320	1/640	Sjögren Syndrome, Hypothyroidism (Non Hashimoto)
16	72	Fem	1/80	Negative	Hypothyroidism *, COPD
17	71	Fem	1/80	Negative	Primary Hyperparathyroidism, Asthma

\* Antibodies lacking to define autoimmune etiology

Table 2 – Associated Antibodies

N°	RF	CCP	Sm	DNA	Scl 70	RNP	Ro	La	Jo-1	ACA	CRP	ESR
1	N	N	-	-	-	-	N	N	-	-	Normal	Normal
2	N	-	N	-	N	N	N	N	-	Y	High	High
3	N	-	-	N	-	-	-	-	-	-	Normal	High
4	-	-	-	-	-	-	N	N	-	-	-	-
5	N	N	N	N	-	-	N	N	-	-	Normal	Normal
6	N	-	N	N	-	-	N	N	-	-	High	High
7	N	-	-	N	-	-	-	-	-	-	-	High
8	N	-	N	-	-	N	N	N	-	-	High	High
9	N	-	-	-	-	-	N	N	-	-	Normal	Normal
10	N	N	N	N	-	N	N	N	-	-	High	Normal
11	N	-	N	N	-	-	N	N	-	-	Normal	High
12	-	-	N	-	-	N	N	N	Y	-	Normal	Normal
13	N	N	-	-	-	-	-	-	-	-	Normal	High
14	N	N	N	-	-	N	N	N	-	-	Normal	Normal
15	Y	-	-	-	-	-	Y	Y	-	-	Normal	Normal
16	-	-	-	-	-	-	-	-	-	-	Normal	Normal
17	N	-	-	-	-	-	-	-	-	-	Normal	High

RF: Rheumatoid Factor, CCP: Cyclic Citrulinated Peptide, ACA: Anti Centromere, CRP: C reactive Protein, ESR: Erythrocyte Sedimentation Rate,

### Results:

Total IIF between 2007-2015: 13.056 (positive IIF: 5.774)  
 Total CDS pattern: 21.  
 Exclusion: 4 patients (No clinical records available)  
 Prevalence: 0,36 %  
 Sex: Female 100%  
 Age: Median 62 years ( Range 50-81)  
 Clinical relevance: 53% (9/17) of the patients had an autoimmune disease, being Hashimoto Thyroiditis (4/8) the most frequent one.



Abstract Link



Poster Link

**Conclusion:** CDS pattern is uncommon. However, 53% of patients had an autoimmune disease. Hashimoto thyroiditis was the most common pathology.