CMPLE (vectors)

Compare signed less than or equal to vector, setting the condition flags

Compare active signed integer elements in the first source vector being less than or equal to corresponding signed elements in the second source vector, and place the boolean results of the comparison in the corresponding elements of the destination predicate. Inactive elements in the destination predicate register are set to zero. Sets the first (N), none (Z), !last (C) condition flags based on the predicate result, and the V flag to zero.

This is a pseudo-instruction of [CMP<cc> (vectors)](#). This means:

- The encodings in this description are named to match the encodings of [CMP<cc> (vectors)](#).
- The assembler syntax is used only for assembly, and is not used on disassembly.
- The description of [CMP<cc> (vectors)](#) gives the operational pseudocode, any constrained unpredictable behavior, and any operational information for this instruction.

31	30	29	28	27	26	25	24	23 22	21	20 19 18 17 16	15	14	13	12 11 10	9 8 7 6 5	4	3 2 1 0
0	0	1	0	0	1	0	0	size	0	Zm	1	0	0	Pg	Zn	0	Pd

ne

```
CMPLE <Pd>.<T>, <Pg>/Z, <Zm>.<T>, <Zn>.<T>
```

is equivalent to

```
CMPGE <Pd>.<T>, <Pg>/Z, <Zn>.<T>, <Zm>.<T>
```

Assembler Symbols

<Pd>   Is the name of the destination scalable predicate register, encoded in the "Pd" field.

<Zm>   Is the name of the second source scalable vector register, encoded in the "Zm" field.

<Zn>   Is the name of the first source scalable vector register, encoded in the "Zn" field.

<T>
Is the size specifier, encoded in "size":

size	<T>
00	B
01	H
10	S
11	D

<Pg>
Is the name of the governing scalable predicate register P0-P7, encoded in the "Pg" field.

Operation

The description of [CMP<cc> (vectors)](#) gives the operational pseudocode for this instruction.

Operational information

If FEAT_SVE2 is implemented or FEAT_SME is implemented, then if PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
  - The values of the data supplied in any of its operand registers when its governing predicate register contains the same value for each execution.
  - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
  - The values of the data supplied in any of its operand registers when its governing predicate register contains the same value for each execution.
  - The values of the NZCV flags.

If FEAT_SME is implemented and the PE is in Streaming SVE mode, then any subsequent instruction which is dependent on the predicate register or NZCV condition flags written by this instruction might be significantly delayed.