Table 1: biological tests in SMD

Tests	Mandatory	Recommended	Under validation
Morphology			
Marrow aspirate	X		
Marrow biopsy		X[1]	
Iron staining	X		
Quantification of dysplasia	X		
WHO 2008 Classification	X		
Cytogenetics			
Conventional karyotype	X[2]		
FISH CEP 7	X[3]		
FISH 5 q	X[3]		
FISH CEP8		X[3]	
Pronostic scores			
IPSS and IPSS-R	X		
Others			
Folate, vitamin B12, creatinine	X		
Serum erythropoietin		X[4]	
Serum Ferritin	X[5]		
HLA typing	X[6]		
HLA DR typing		X[7]	
Somatic mutations			
JAK2, CAL - R, MPL	X[8]		
FLT3-ITD, NMP1	X	X[9]	
TP53		X[10]	
ASXL1		X[11]	
"Myeloid" Panel		X[12]	X 14
GATA 2, RUNX1, TERC, TERT		X[13]	
Immunophen otyping			

[1] required if diagnosis uncertain or hypocellular marrow
[2] Repeat if failure.
[3] If cytogenic failure and/or morphological suspicion and/or only 1-2 abnormal mitose.
[4] if IPSS low or or int 1
[5] if RBC transfusions.
[6] If allo SCT considered.
[7] If immuno suppressive treatment considered.
[8] if MPN suspected
[9] If progression to AML suspected
[10] If isolated del 5q.
[11] If CMML.
[12] Younger patient IPSS int 1 or R-IPSS int.
[13] If familial history of MDS, AML, aplastic anemia.
14 wider indication of a myeloid panel

Table 2: WHO 2008 classification of MDS

Subtype	Blood	Marrow
Refractory Anemia With excess blasts 1 (**RAEB**)	Cytopenia (s) <5% Blasts No auer rods <1000 ml Monocytes	Unilineage or multilineage Dysplasia No Auer rods 5-9% Blasts
Refractory with anemia With excess blasts I I (**RAEB II**)	Cytopenia (s) <19% blasts Auer rods possible <1000/ml Monocytes	Unilineage or multilineage Dysplasia 10-19% Blasts Auer rods possible
Refractory Cytopenia (RCUD) Uni-or Bicytopenia Refr. Thrombocytopenia Refr. Neutropenia Refr. Anemia	Anemia No Blasts	Only one cytopenia only n>10% cells <5%Blasts >15% Ring sideroblasts
Refectory Anemia vith Ring sideroblasts (**RARS**)	Anemia no blasts	Dyserythropoiesis only < 5% Blasts >15% Ring sideroblasts
Refractory Cytopenia with multilineage Dysplasia with or without Ring sideroblasts **(RCMD)**	Cytopenia (s) ≤ 1% blasts no Auer rods. < 1000/µl Monocytes	Dysplasia in >10% of the cells of 2 cell lines < 5% Blasts, no Auer rods. ± 15% Ringsideroblasts
MDS with isolated del (5q)	Anemia normal or elevated platelets, ≤ 1% blasts	5% blasts, no Auer rods hypolobulated Megakaryocytes
MDS-Unclassifiable	Cytopenia	< 5% blasts

Table 3: International Prognostic Scoring System

Score value					
Pronostic variable	**0**	**0.5**	**1.0**	**1.5**	**2.0**
Marrow blasts, %	< 5	05 – 10	-	11-20	21-30
Karyotype*	Good	Interm.	Poor		
Cytopenias.	0/1	2/3	-		

Scores	
Low	0
Int-1	0.5-1.0
Int-1	1.5-2.0
High	≥ 2

Cytogenetics	
FAV	Normal -y Isolated del(5q) Isolated del(20q)
UNFAV	Complex (≥3 abn)
.	chrom 7 abn
INT	Others

Table 4 : Revised IPSS (R-IPSS)

Table 4a: Karyotype (IPSS-R)

	Proportion of patients (%)	Karyotype	Median survival (years)	Time to 25% AML evolution (years)
Very good	4%	-Y, del(11q)	5.4	NR
Good	72%	Normal, del(5q), del (12 p), del(20q), double including del(5q)	4.8	9.4
Intermediate	13%	Del(7q), + 8, + 19, i(17q), any other single or double independent clones	2.7	2.5
Poor	4%	-7, inv (3) /t(3q) /del(3q) double including -7 del(7q); complex: 3 abnormalities	1.5	1.7
Very poor	7%	Complex > 3 abnormalities	0.7	0.7

AML =acute myeloid leukaemia. NR = not reached.

Table 4b: IPSS-R Prognostic Score Values

Prognostic variable	0	0.5	1	1.5	2	3	4
Cytogenetics	Very Good		Good		Intermediate	Poor	Very Poor
B M blasts %	≤2		> 2 - < 5%	5 10%	5 10%	> 10%	
Hemoglobin (g/dL)	≥10		8 < 10	< 8			
Platelets (G/L)	≥100	50 < 100	< 50				
ANCs (G/L)	≥0, 8	< 0.8					

Table 4 c: IPSS-R Prognostic risk Categoies/Scores

RISK GROUP	RISK SCORE
Very low	≤1. 5
Low	> 1.5 - 3
Intermediate	> 3 - 4.5
High	> 4.5 - 6
Very High	> 6

Table 5 : Treatment of MDS : candidates for allo SCT

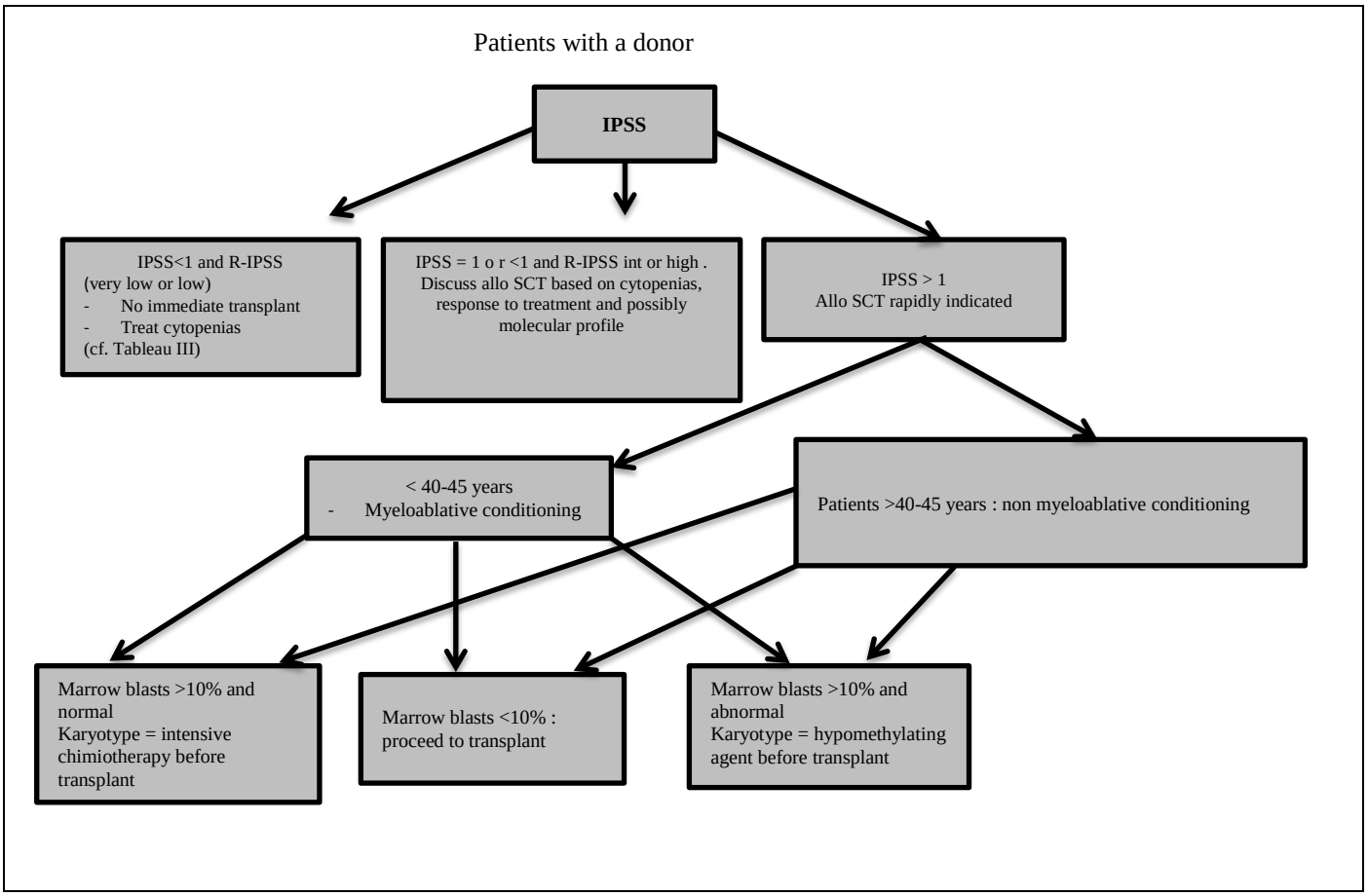

Tableau 6 : Treatment of higher risk MDS (if allo SCT is not considered)

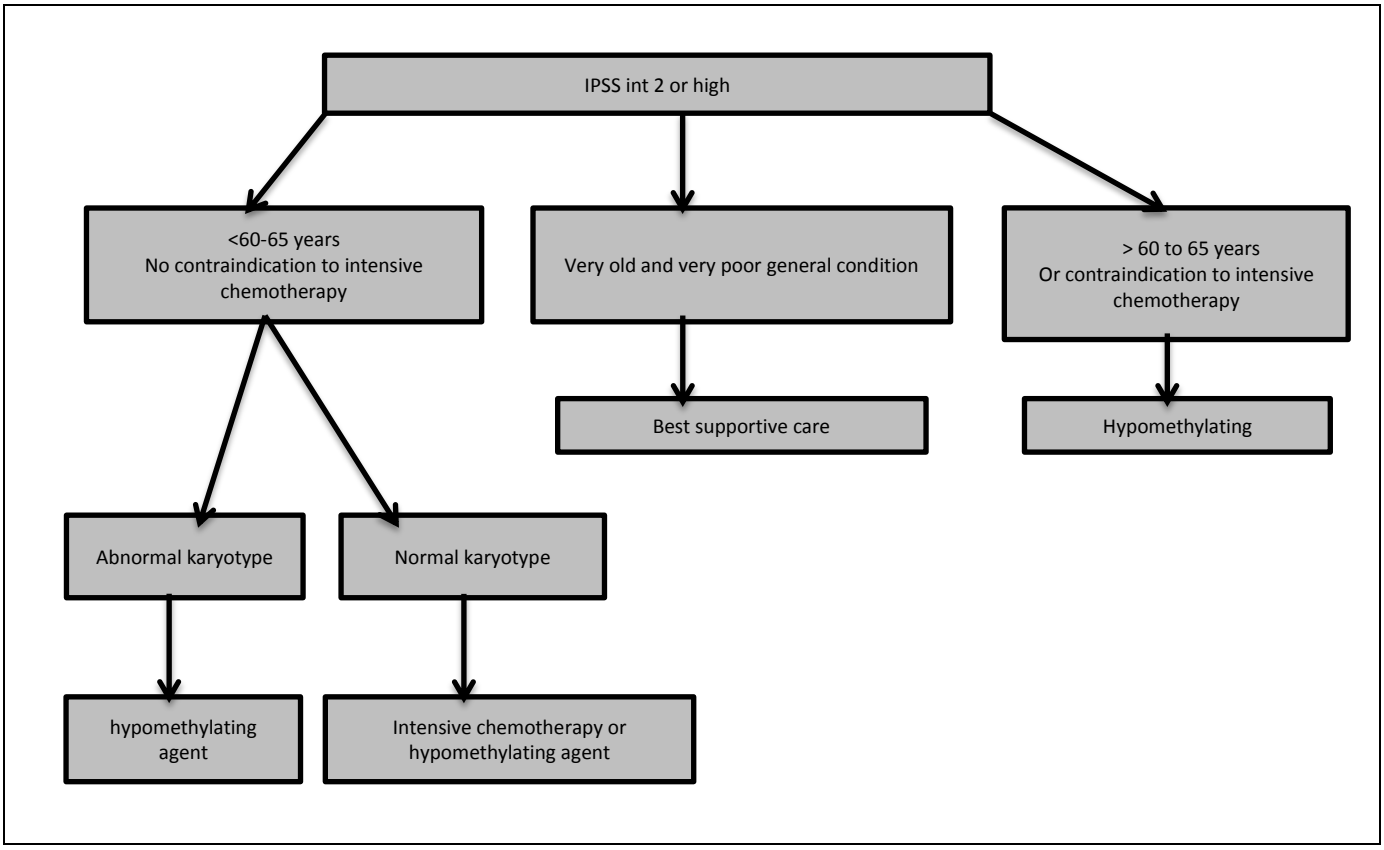

Table 6 : Treatment of IPSS low or int 1 MDS